

SANTA MONICA BAY NATIONAL ESTUARY PROGRAM

Fiscal Year 2020 Work Plan

1 October 2019 – 30 September 2020

~~14 February~~ 10 April 2019

Work Plan prepared for SMBNEP Management Conference

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Final page numbers for appendices will be manually incorporated into non-redline version of final work plan

Common Work Plan Acronyms

| | |
|------------|---|
| Army Corps | Army Corps of Engineers |
| ASBS | Areas of Special Biological Significance |
| BEP | Boater Education Program |
| BRP | Santa Monica Bay Restoration Plan |
| BWER | Ballona Wetlands Ecological Reserve |
| CalTrans | California Department of Transportation |
| CCMP | Comprehensive Conservation and Management Plan (formerly BRP) |
| CCVA | Climate Change Vulnerability Assessment |
| CDBW | California Department of Boating and Waterways |
| CDFW | California Department of Fish and Wildlife |
| CDPH | California Department of Public Health |
| CDWR | California Department of Water Resources |
| CMP | Santa Monica Bay Comprehensive Monitoring Program |
| CNRA | California Natural Resources Agency |
| CoSMoS | Coastal Storm Modelling System |
| CRAM | California Rapid Assessment Method |
| CRI | Loyola Marymount University's Coastal Research Institute |
| CVA | Clean Vessel Act |
| CWMW | California Wetland Monitoring Workgroup |
| DDT | Dichlorodiphenyltrichloroethane |
| EWMP | Enhanced Watershed Management Plans |
| FMP | Fishery Management Plan |
| FOLD | Friends of the LAX Dunes |
| GB | Santa Monica Bay Restoration Commission Governing Board |
| GHG | Greenhouse Gases |
| GPRA | Government Performance and Results Act |
| HABs | Harmful Algal Blooms |
| HHW | Household Hazardous Waste |
| JWPCP | Joint Water Pollution Control Plant (Carson) |
| LACDBH | Los Angeles County Department of Beaches and Harbors |
| LACDPH | Los Angeles County Department of Public Health |
| LACDPW | Los Angeles County Department of Public Works |
| LACFCD | Los Angeles County Flood Control District |
| LACSD | Sanitation Districts of Los Angeles County |
| LADWP | Los Angeles Department of Water and Power |
| LARC | Los Angeles Regional Collaborative for Climate Action |
| LARWQCB | Los Angeles Regional Water Quality Control Board |
| LASAN | City of Los Angeles Sanitation |
| LCP | Local Coastal Plan |
| LVMWD | Las Virgenes Municipal Water District |
| MDRA | Marina Del Rey Anglers |
| MPA | Marine Protected Area |
| MRCA | Mountains Recreation and Conservation Authority |
| MWD | Metropolitan Water District of Southern California |
| NEP | National Estuary Program |

| | |
|-------------|---|
| NMFS | National Oceanic and Atmospheric Administration's National Marine Fisheries Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NPDES | National Pollutant Discharge Elimination System |
| NPS | National Parks Service |
| NRC | Natural Resource Council |
| NZMS | New Zealand Mudsnails |
| OA | Ocean Acidification |
| OPC | Ocean Protection Council |
| OREHP | Ocean Resource Enhancement Hatchery Program |
| OWDS | On-site Wastewater Disposal Systems |
| PCB | Polychlorinated biphenyls |
| POTW | Public Owned Treatment Works |
| Prop. | Proposition Grant |
| PVPLC | Palos Verdes Peninsula Land Conservancy |
| RCDSMM | Resource Conservation District of the Santa Monica Mountains |
| SCC | California State Coastal Conservancy |
| SCCOOS | Southern California Ocean Observing Systems |
| SCCWRP | Southern California Coastal Water Research Project |
| SCMI | Southern California Marine Institute |
| SFEP | San Francisco Estuary Partnership |
| SLC | State Lands Commission |
| SLR | Sea Level Rise |
| SMBNEP | Santa Monica Bay National Estuary Program |
| SMBRA | Santa Monica Bay Restoration Authority |
| SMBRC | Santa Monica Bay Restoration Commission |
| SMMC | Santa Monica Mountains Conservancy |
| State Parks | California Department of Parks and Recreation |
| SWRCB | State Water Resources Control Board |
| TAC | Santa Monica Bay Restoration Commission Technical Advisory Committee |
| TBF | The Bay Foundation (also known as the Santa Monica Bay Restoration Foundation) |
| TMDL | Total Maximum Daily Load |
| UCD | University of California, Davis |
| UCLA | University of California, Los Angeles |
| UCSB | University of California, Santa Barbara |
| USC | University of Southern California |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| WAC | Santa Monica Bay Restoration Commission Watershed Advisory Council |
| WBMWD | West Basin Municipal Water District |
| WMP | Watershed Management Plans |

Commented [A3]: Suggested change: "State Water Board"

Commented [A4R3]: Not incorporated because of the inclusion of this acronym previously in all other SMBNEP documents (e.g., CCMP, previous Work Plans, Annual Reports, supplemental documents, etc.). Left for clarity.

I. INTRODUCTION

Commented [A5]: Note: there may be minor grammatical or formatting differences between this redline version of the Work Plan and the final pdf of the GB approval draft.

Santa Monica Bay National Estuary Program Entities

Section 320 of the federal Clean Water Act establishes the National Estuary Program (NEP), which is administered by the United States Environmental Protection Agency (USEPA). USEPA identified the Santa Monica Bay as a national estuary, with the concurrence of the State that identifies actions and priorities to restore the Santa Monica Bay. The Santa Monica Bay National Estuary Program (SMBNEP) is a locally driven program supported by a private-public partnership. This partnership is implemented by three entities during the FY20 Work Plan period: Santa Monica Bay Restoration Commission (SMBRC), Santa Monica Bay Restoration Authority (SMBRA), and Santa Monica Bay Restoration Foundation also known as The Bay Foundation (TBF). The three entities work together to implement the Comprehensive Conservation and Management Plan (CCMP) for SMBNEP along with their many partners. Loyola Marymount University's Coastal Research Institute (CRI) works collaboratively with TBF to support CCMP and Comprehensive Monitoring Program efforts. Each entity is briefly described below, and more information can be found on the roles, membership, and relationship between entities on the following webpage: http://www.smbrc.ca.gov/about_us/orientation/.

SMBRC is a non-regulatory, locally-based state entity established by an act of the California Legislature in 2002 [Pub. Res. Code §30988(d)]. SMBRC is charged with coordinating activities of federal, state, local, and other entities to restore and enhance the Santa Monica Bay, including identifying and leveraging funding to put solutions into action, building public-private partnerships, promoting cutting-edge research and technology, facilitating stakeholder-driven consensus processes, and raising public awareness (www.smbrc.ca.gov). SMBRC brings together local, state, and federal agencies, environmental groups, businesses, scientists, and members of the public on its 36-member Governing Board. SMBRC is also supported by a Technical Advisory Committee (TAC), and a broad stakeholder body, the Watershed Advisory Council (WAC). SMBRC is supported administratively by the State Water Resources Control Board (SWRCB), including staff and office space.

SMBRA was created in 2004 by a joint exercise of powers agreement between SMBRC and the Los Angeles County Flood Control District and operates as a local public agency within the Santa Monica Bay watershed and the jurisdictional boundaries of SMBRC and the District. The purpose of SMBRA is to broaden funding opportunities for projects within the Santa Monica Bay Watershed.

TBF is an independent, non-profit 501(c)(3) organization founded in 1990. The mission of TBF is to contribute to the restoration and enhancement of the Santa Monica Bay and other coastal waters (www.santamonicaabay.org). TBF receives an annual grant from USEPA pursuant to section 320 of the Clean Water Act (33 U.S.C. §1330) to implement the CCMP. TBF also receives important grants and donations from other entities to support TBF and its implementation of the CCMP.

The Coastal Research Institute (CRI) brings together expertise from Loyola Marymount University's Frank R. Seaver College of Science and Engineering and TBF to restore and enhance Santa Monica Bay and local coastal waters. CRI contributes to a better understanding of global urban coastal resource management through the execution of projects that stem from TBF's work as part of SMBNEP and its efforts to implement the CCMP. CRI engages educators, academics, graduate students, undergraduate students, agencies, industry and more in research related to coastal resource management.

Comprehensive Conservation and Management Plan and FY20 Work Plan

The original CCMP, or Bay Restoration Plan (BRP), of 1995 was updated in 2008 and again in 2013. SMBNEP is currently undergoing a major CCMP revision, completing a revised Action Plan (part of the CCMP) in October 2018. EPA's funding guidance describes a revision as an alteration of the CCMP that involves significant changes such as new or significantly altered goals, or to incorporate new information and data, such as climate change. Updates and revisions are made to the CCMP through an iterative and public and iterative process with active participation from members of the Governing Board as well as members of the WAC and TAC. The new 2018 CCMP Action Plan identified approaches and strategies intended to make substantial progress toward clean waters and healthy habitats over the next five to twenty years. It reflected the consensus of SMBNEP partners with regard to the best strategies and priorities to ensure continued progress and achieve improved water quality, protection and restoration of habitats, and benefits to humans in the Bay and its watershed. The current revision to the CCMP still requires the completion of several steps, notably the associated Financial Plan, supplemental information, and consideration of the structure and governance of SMBNEP. Additionally, the Comprehensive Monitoring Program (CMP) is also being revised, led by the Technical Advisory Committee TAC.

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This Fiscal Year 20 (FY20) Work Plan builds off the newly released 2018 CCMP Action Plan and is focused on a subset of the identified Actions and Next Steps in the Plan. The purpose of Work Plan is to identify program objectives, tasks, and timelines of the work to be performed during the federal fiscal year (FY20): October 1, 2019 – September 30, 2020, specifically to accomplish the goals and actions of the 2018 CCMP Action Plan and various technical, managerial, and administrative activities necessary to continue to advance the mission of SMBNEP.

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The management conference and public stakeholders identified the need to retain the top priorities of SMBNEP from the previous BRP, which included improving water quality, conserving and rehabilitating natural resources, and protecting the Bay's benefits and values to people. Given the cross-cutting and multi-benefit nature of most of the projects and programs listed in this Action Plan, the management conference decided not to arbitrarily separate out projects based on categorizing them into one of those three priority areas. These three priority areas should be thought of as integrated and supported throughout the Work Plan, along with a new priority area, understanding and adapting to climate change impacts. Within these priority areas, seven goals were identified in the 2018 CCMP Action Plan and are listed below. All seven goals are to be addressed by the actions and next steps identified in this FY20 Work Plan. The goals are achieved through actions by many different entities, including public agencies and non-profit organizations that take the lead on specific projects.

Seven CCMP Action Plan Goals:

1. Protect, enhance, and improve ecosystems of Santa Monica Bay and its watersheds
2. Improve water availability
3. Improve water quality
4. Enhance socio-economic benefits to the public
5. Enhance public engagement and education
6. Mitigate impacts and increase resiliency to climate change
7. Improve monitoring and ability to assess effectiveness of management actions

Connection to USEPA Goals

The Clean Water Act section 320 grant is administered by USEPA and provided to TBF for carrying out certain annual Work Plan activities. Non-federal grant matching funds are required at a minimum rate of 1:1. In lieu of direct funding, the State Water Resources Control Board (SWRCB) contributes by providing state staff, office space, and other administrative services to SMBRC. In addition to the SWRCB contribution, the federal grant match requirement is met using funds from the State bond grants [e.g., Proposition 50 and 84 grants administered by the SWRCB and Proposition 12 grants administered by the State Coastal Conservancy (SCC)], and other State and local grants and funds received and managed by TBF and SMBRA. Projects and activities conducted by other entities identified in this Work Plan are funded by various sources secured by those entities.

The FY20 Work Plan and the CCMP serve USEPA's Goal 1: Core Mission – deliver real results to provide Americans with clean air, land, and water. EPA's FY 2014-2018 Strategic Plan charts a course for the agency and is organized around five key goals, including: addressing climate change and improving air quality; protecting America's waters; cleaning up our communities and advancing sustainable development; ensuring the safety of chemicals and preventing pollution; and enforcing environmental laws. This Work Plan includes activities that will contribute to the FY14-18 EPA Strategic Plan goals as well as the Office of Water (OW) *National Water Program Guidance* (FY16 and FY17). Specifically, the SMBNEP contributes to the element of the guidance that states: "EPA will continue to build the capacity within the National Estuary Program to adapt to changes from climate change on the coasts, and will provide additional assistance to individual NEPs to support their work to develop adaptation plans for their study areas or technical assistance to support implementation of those plans."

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II. WORK PLAN OVERVIEW

Work Plan Structure

Section II of the Work Plan provides a brief discussion of the structure of the Work Plan and a summary of SMBNEP program accomplishments and key projects or programs. Section III provides details on the individual actions, next steps, objectives, deliverables, and environmental outcomes (results) for each next step and contains the bulk of the information contained in this Work Plan. Many of these actions or next steps have detailed implementation, monitoring, or permitting plans associated with them and summarizing them would make this document an unmanageable size. For additional details on individual projects, refer to TBF's or SMBRC's websites. Section IV will depict the Work Plan budget and travel documentation in the final Work Plan. The first draft of this Work Plan is being developed from the CCMP Action Plan, workshops with the Governing Board and Watershed Advisory Council, and partner and staff input. As SMBNEP is still in FY19, progress tracking and budget expenditures are estimated for the remainder of FY19, when needed.

The scope of this Work Plan is broad and multifaceted. Significant efforts will be devoted to carry out water quality improvement and habitat restoration programs and projects this year, in support of many of the actions in the 2018 CCMP Action Plan. The structure of the Work Plan is intended to mimic the structure of the CCMP Action Plan to facilitate ease of translation of progress towards implementing the 44 identified actions in the 2018 CCMP Action Plan. There will also be focus and efforts in FY20 to implement programs that interconnect and integrate issues across traditional boundaries such as climate change and comprehensive monitoring, and efforts to improve public outreach and participation, especially as part of the stakeholder education and engagement category.

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Several appendices will also be contained in the final Work Plan. Appendix A includes the completed projects table from FY19. Appendix B includes the Santa Monica Bay National Estuary Program staffing tables. The draft version of Appendix A, the completed projects table, is available in this draft version for review.

Work Plan Changes from FY19

The structural differences between the FY19 Work Plan and the FY20 Work Plan are considerable due to the cross-walking between this document and the new structure of the 2018 CCMP Action Plan. However, many of the priorities and actions remain similar to previous years. New projects are identified in the main tables with an asterisk. This new structure and format of the Work Plan document reflects the goals of SMBNEP to increase clarity, increase reporting efficiency, increase the readability and succinctness of the Work Plan, increase consistency between the CCMP Action Plan and Annual Work Plans, and increase consistency with EPA funding guidance. If an action identified in the Action Plan is not contained in this Work Plan, it still remains a priority of SMBNEP. It may be that there isn't identified funding hasn't been identified for FY20, or that action may still be in development or in a planning stage. This does not preclude those next steps from being included in future Work Plans as part of the 5-year CCMP Action Plan. The FY20 Work Plan is only the first implementation year of the 2018 CCMP Action Plan. Note that Actions #23 and 41 were deleted in this final Work Plan based on not having any projects or next steps identified for this Work Plan time period by SMBNEP or the Management Conference.

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SMBNEP Program Accomplishments from Previous Year (2018)

This section contains a synthesis of programmatic or environmental success stories from the past year. This includes highlights from significant programs or projects from throughout 2018 and is categorically subdivided into 'wetlands, rivers, and streams', 'beaches, dunes, and bluffs', 'in the ocean', 'climate change', and 'our communities'. For additional detail on project activities, visit TBF's website: www.santamonicaabay.org.

Commented [A20]: GB suggestion: just link to Baywire instead of repeating this section

Commented [A21R20]: Not incorporated because NEP staff felt that it was important to repeat in a stand-alone document and highlight NEP accomplishments, per the EPA funding guidance

Wetlands, Rivers, and Streams

- Malibu Lagoon Post-Restoration Monitoring – This long-term comprehensive monitoring program evaluates the condition of the post-restoration Lagoon through biological, physical, and chemical surveys. In July 2018, a five-year Comprehensive Monitoring Report was completed and released in July, and a subset of surveys continued into a final year of monitoring. The Malibu Lagoon continues to have improved circulation, water quality, and overall condition. Public restoration events are held monthly to remove non-native, invasive vegetation.
- Community-Based Restoration at Ballona Wetlands – This long-term project is restoring approximately three acres of heavily degraded habitats at the Ballona Wetlands Ecological Reserve through community-based restoration. In 2018, 95 volunteers removed invasive vegetation through 14 community restoration events. Additionally, TBF produced a Year 2 Annual Report in July 2018. Year 2 results indicated a significant reduction in non-native vegetation cover in most areas as compared to the baseline, and an increase in native vegetation cover. Ongoing invasive vegetation removal, monitoring, and revegetation efforts continue in 2019.
- Evaluating Regional Wetland Monitoring Programs – This program is working towards increasing regional understanding of the condition of local coastal wetland systems and applying that knowledge towards standardizing wetland monitoring across the state of California. In 2018, this program continued work on data standardization, data consolidation and analyses, held program partnership meetings, and conducted outreach activities. This program is conducted in partnership with California State University, Long Beach, Tijuana River National Estuarine Research Reserve, and Southern California Coastal Water Research Project.
- Restore America's Estuaries National Summit – This conference explored cutting-edge issues in coastal restoration and management and was comprised of field sessions, presentations, and events. In December 2018, TBF joined hundreds of coastal habitat scientists and managers at the Restore America's Estuaries Summit in Long Beach to highlight monitoring results and restoration efforts by TBF across projects from beaches and dunes, to wetlands and kelp forests. TBF led field sessions, presentations, panels, and coordinated sessions. SMBNEP joined sister estuary programs from across the country to learn from each other and support collaborative opportunities.
- Liberty Canyon Wildlife Crossing — TBF managed this project for the Santa Monica Mountains Resources Conservation District which was designed to attract and assist wildlife in crossing under the 101 freeway. Fencing, native plants, boulders and other features were installed to enhance an underpass of the freeway adjacent to Liberty Canyon Road. Wildlife were using the underpass shortly following its completion though it will require years for the vegetation planted at the site to mature. Unfortunately, the site was impacted by the wildfire in November 2018 and efforts are being made to acquire funds to rebuild the site.

Beaches, Dunes, and Bluffs

- LAX Dunes Restoration – In partnership with Los Angeles World Airports and Friends of the LAX Dunes, TBF conducts monthly volunteer restoration events at the LAX Dunes to remove invasive vegetation and teach the local community about the importance and resilience of coastal dune systems. Additionally, TBF coordinates biological monitoring activities and leads partners in larger-scale invasive plant removal efforts. In 2018, 689 volunteers completed over 2,000 hours and pulled over 650 bags of invasive, non-native vegetation. Additionally, the program had volunteer participants from over 200 unique zip codes, with many of them from disadvantaged communities. Lastly, Los Angeles Conservation Corps crews weed whacked an additional 7.8 acres of non-native brome grass and removed nearly one acre of iceplant. Two reports were produced in June, the Year 2 Report summarizing community restoration efforts and an Ecological Monitoring Report.
- Santa Monica Beach Restoration Pilot Project – This pilot project is restoring approximately three acres of sandy coastal habitat on the beach in the City of Santa Monica. The project is reestablishing native vegetation on the beach aiming to create a sustainable coastal strand and foredune habitat complex resilient to sea level rise. In 2018, native dune vegetation and sand hummocks continued to establish, ongoing monitoring informed climate change resiliency planning, and a Year 2 Annual Report was produced in August.
- Malibu Living Shoreline Project – This project, in partnership with the City of Malibu, Los Angeles County Department of Beaches and Harbors (LACDBH), and State Coastal Conservancy (SCC) aims to restore three acres of sandy beach and dune habitats at Zuma Beach and Point Dume Beach to improve coastal resiliency and increase the health of the beach systems through a living shoreline approach. In 2018, project partners continued planning and permitting discussions, initiated community outreach, and conducted baseline monitoring.
- Los Angeles Living Shoreline Project – This innovative project, in partnership with LACDBH, State Parks, and SCC, aims to implement a multi-habitat approach to restore approximately 3.5 acres of beach and coastal bluff habitat and to improve coastal resiliency in a disadvantaged community. This project also incorporates the experimental establishment of offshore eelgrass within a one-acre footprint. In 2018, TBF applied for and received funding, initiated partnership development, and advanced stakeholder engagement.
- Manhattan Beach Dune Restoration – This project aims to restore approximately 3.5 acres of foredune habitat in the City of Manhattan Beach to provide infrastructure protection and increase coastal resiliency, while improving habitat quality through invasive plant removal and native plant establishment. In 2018, TBF began partnership and concept development with LACDBH, City of Manhattan Beach, and USGS, and initiated conversations with their City Council and Sustainability Task Force.
- Healthy Beaches Research – In partnership with Loyola Marymount University's Coastal Research Institute (CRI), this research project is conducting a site-suitability analysis to determine potential areas for beach restoration, evaluating factors such as recreational use, physical, and biological characteristics, while contributing information to the Comprehensive Monitoring Program. In 2018, Dr. John Dorsey and two internship students completed a pilot study and final report for three beach locations in the Bay, and Dr. Cristina Tirado and one internship student completed a literature review on human health benefits of green (and blue) spaces and restored habitats.

Commented [A22]: GB question: Are they called internship students instead of interns now?

Commented [A23R22]: Internship students is just the longer, more formal term. Both mean the same thing, 'interns' is just the abbreviation.

In the Ocean

- Kelp Forest Restoration – This project aims to restore up to 150 acres of giant kelp forest. Commercial fishermen and TBF scientists restore and monitor these reefs, respectively, as they are transformed from urchin barrens to kelp forests. In 2018, an additional 3.9 acres of kelp forest have been restored for a total of 46.9 acres since the project began in 2013.
- Abalone Restoration – This project implements a multifaceted approach to research and method development to restore populations of abalone to Santa Monica Bay and adjacent coastal waters. In 2018, TBF completed construction of the second abalone laboratory to continue researching wild and captive spawning techniques, methods for raising abalone in aquarium facilities, and outplanting abalone back into the wild to rebuild natural populations. Renovations began on the existing facility and will be completed in February 2019. The newly renovated TBF abalone laboratory will act as a Southern California hub for white abalone research and restoration activities and enable us to support the recovery of these endangered marine snails in the wild.
- MPA Outreach – TBF participates in the LA Marine Protected Area (MPA) Collaborative, an association to coordinate with other NGOs and stakeholders throughout southern California to share vital information about the status and management of the MPA network in the region. In October 2018, TBF participated in “Honor the Ocean”, a celebration of Santa Monica Bay’s MPAs. The event featured traditional Chumash blessings and elder storytelling, educational booths, and interactive activities on Zuma Beach for the public to enjoy.
- Socio-economic Research Related to Marine Spatial Planning – This aerial-survey based project maps the location, type, and activity of boats along the southern California coast from the U.S. Mexican Border to Point Conception, tracking boater responses to the establishment of the Marine Protected Area network. Aerial survey data collected by TBF over the last 10 years in coordination with Lighthouse was published in Ocean and Coastal Management. Dr. Amanda Zellmer of Occidental College authored the paper using pre- and post-MPA fishing trends observed during these surveys along with historical landing data and bathymetry maps to produce distribution models. These models can be used to inform monitoring of fishing activities within MPAs and how to effectively apply limited enforcement resources.
- Oceanographic Shore Station – TBF, in partnership with Southern California Coastal Ocean Observing System, Scripps Institution of Oceanography, Los Angeles Waterkeeper, US Environmental Protection Agency, and City of Los Angeles Bureau of Sanitation, assembled funding to reestablish and conduct periodic maintenance of a sensor array anchored to the Santa Monica Pier. This station is one of four in southern California collecting real-time data on temperature, pressure, chlorophyll, and salinity. The data are accessible to the general public and decision makers via the [SCCOOS website](#).

Climate Change

- Climate Change Action Planning and CCMP Action Plan – Climate change, including climate stressors for the region such as sea level rise and drought, continue to be important drivers for planning and adaptive management actions. In 2018, SMBNEP released the [Action Plan for the Comprehensive Conservation and Management Plan \(CCMP\)](#), including actions related to climate change such as filling in important data gaps for our region, or prioritizing projects to increase resilience of our coastal areas such as beach and dune restorations. This Action Plan was a significant collaborative effort by SMBNEP’s Management Conference, staff, and interested stakeholders and members of the public. The seven goals and 44 actions it contains represent priorities for our region, established through many workshops and consensus building

activities. Work continues on other components of the CCMP, such as the Comprehensive Monitoring Program and the Financial Plan.

- *Ocean Acidification* – An array of instruments that measure pH, dissolved oxygen, and pCO₂ have been deployed off the Palos Verdes Peninsula since the second half of 2016 by the Sanitation District of Los Angeles County. The data collected by this project will improve our understanding of ocean acidification and hypoxia off our coast. In 2018, data were collected at the second location at a depth of 60 m and showed less variability as compared to the first deployment year in 15 m. These data allowed good characterization of the frequency, magnitude, and duration of OAH events in the nearshore surface and offshore bottom layers, and further investigation in the causes of variability using highly complex, coupled physical-biogeochemical modeling.
- *Kelp and Eelgrass Ocean Acidification Buffer* – University of California Los Angeles' 2018 Senior Practicum class conducted research assessing the strength of kelp and seagrass in mitigating ocean acidification. The focus of their study was to determine the strength of buffering, exhibited by the increase in pH (lowering acidification) in eelgrass and kelp beds in Santa Monica Bay. Their preliminary findings are being built upon by the 2019 Senior Practicum class to further this research.
- *Kelp Forest Hydrodynamics* – This cooperative project is designed to inform how kelp forests influence current patterns, wave velocity, and sediment transport off the coast of the Palos Verdes Peninsula. In 2018, data collection was completed in a kelp restoration site off Palos Verdes and a preliminary results report was published. Additional funding was awarded to California State University, Northridge and University of California, Davis from University of Southern California SeaGrant to continue this study on two more kelp forest sites. This work will resume in winter 2019.
- *Post-Fire Recovery and Monitoring* – The Woolsey Fire started on 8 November 2018, burning almost 100,000 acres of land and destroying over 1,500 structures in Los Angeles and Ventura Counties, including large areas of SMBNEP's northern watersheds. A large portion of the burn area was determined to be moderate soil burn severity, increasing the potential for runoff, debris flows, and other potential hazards. TBF is participating in a post-fire collaborative stakeholder group to consolidate and prioritize monitoring efforts as well as communicating with agencies and municipalities to coordinate recovery efforts.

Our Communities

- *Proposition 84 Grant Program* – SMBRC was originally allocated \$18 million in state funding for projects including coastal watershed contamination prevention and coastal and marine habitat restoration. Two projects were completed in 2018, Milton Green Street and University Park Neighborhood Rain Gardens. The Mountains Recreation and Conservation Authority's Milton Green Street project installed 14 Vegetated Stormwater Curb Extensions (VSCEs) adjacent to Ballona Creek. The VSCEs capture, treat, and infiltrate all dry- and a portion of the wet-weather runoff from 4.37-acres of densely developed area. The City of LA completed the University Park Neighborhood Rain Gardens project which installed 35 rain gardens on public parkways along nine streets. The project captures, treats, and infiltrates all dry- and a portion of the wet-weather runoff from a 209-acre drainage in the Ballona Creek watershed. Both projects improve water quality, reduce impermeable surfaces, provide local wildlife habitat, and valuable green space in urban areas.
- *Internship and Research Assistant Program* – Through this program, TBF and CRI coordinate volunteers, students, and postgraduates in research, habitat restoration, and scientific data

collection efforts across many projects. The program also supports the implementation of the Comprehensive Monitoring Program. In 2018, 10 paid and 14 unpaid CRI interns conducted research on a broad array of ecological, physical, and chemical parameters to inform TBF's programs and projects. Additionally, three Loyola Marymount University CRI Faculty Fellows led research projects related to beach characterization, microplastics, and human health benefits from green spaces.

- Boater Education Program – This is a multi-faceted program designed to engage the Southern California boating community to reduce and eliminate boating-related ocean pollution. In 2018, the program continued to publish “The Changing Tide” statewide newsletters, annual tide pocketbook, and the Pumpout Nav app for pumpout station monitoring and public engagement. The program also produced and distributed 8,500 Boater Kits and trained 71 Dockwalker volunteers. In 2018, the program also produced and released an informational video on proper practices to best manage and reduce sewage spills from vessels.
- Clean Bay Certified Program – This program partners with watershed cities to certify restaurants that comply with stormwater permit requirements and additional pollution prevention practices. This year the program distributed 150 toolkits to restaurants. Toolkits included a faucet aerator for water savings, educational posters on best management practices, and information about Clean Bay Certified and Rethink Disposable LA. 120 food service establishments were certified in 2018 using an updated, more rigorous inspection checklist.
- ReThink Disposable LA – Clean Water Action / Clean Water Fund (CWA/CWF) program provides technical assistance to food service establishments for source reduction of single-use disposable items. In 2018, TBF partnered with CWA/CWF to bring ReThink Disposable to Los Angeles. In total, four restaurants (i.e., The Conservatory for Coffee, Tea, and Cocoa, Scoops Chinatown, Gus' Tacos Mexican Grill, and Palette Food and Juice) will collectively reduce single-use disposables by 246,570 pieces and prevent 2,637 pounds of waste from entering the waste stream or ending up as litter on our streets and beaches every year. On average, participating restaurants are also each projected to annually save \$2,000 from reducing or eliminating targeted disposable foodware.
- Table-to-Farm Composting – To better address food waste and greenhouse gas emissions from landfills and transportation due to hauling waste, TBF is working with restaurants in Inglewood and Gardena and Environmental Charter Middle Schools (ECMS) to close the food loop. In 2018, the program built a second compost bin at ECMS Gardena. Since September 2017, 5,276 lbs of food waste has been diverted from landfills and composted, in a four-bin system. 720 students have been engaged in the program and have learned about food waste, compost, and climate issues.
- Water Quality Monitoring – This project is conducted in partnership with CRI to fill important water quality data gaps for our region while contributing data in support of the Comprehensive Monitoring Program. In 2018, three Master's theses were completed analyzing the effectiveness of LID implementation. The first two projects found that the garden retained between 73-100% of all stormwater, with 80-90% reduction in pollutants. Most of the pollutants were retained in the top layers of soil, but below regulatory trigger thresholds. The third project assembled 30 years of fecal indicator bacteria along Bay beaches and found decreasing trends over time for most sites.
- Microplastics Research – Plastic is the most prevalent type of marine debris found in our oceans, and microplastics are considered an emerging constituent of concern due to their ubiquitous presence in the environment, danger to marine life when ingested, and potential to bioaccumulate chemicals up the food web. In 2018, CRI developed and refined a protocol to

extract microplastics from sediments and conducted a pilot study along Bay beaches. Ongoing partnership development with University of California Santa Barbara will continue to inform regional data gaps in the fate and transport conceptual model for microplastics in the nearshore environment and invertebrate community.

III. SMBNEP PLANNED ACTIVITIES

This section outlines each of the FY20 Work Plan actions and next steps to be undertaken during this fiscal year in a summary table. It also highlights whether the project is new or ongoing, objectives, a description/milestone summary, partners, outputs/deliverables, long-term environmental results or outcomes, and the connection to the CWA Core Programs. Outputs or deliverables can be thought of as an activity or effort and/or associated work products that are produced or provided over a specific period of time; outcomes can be thought of as long-term environmental changes or benefits resulting from such activities/efforts. Additional information about each action can be found in the 2018 Action Plan along with an associated narrative.

Many of the FY20 actions are continued from previous efforts or projects. ***Next steps which are new for this fiscal year are identified with an asterisk in the tables***; all other projects or next steps should be assumed to be ongoing. Note that next steps or project activities that are on a grey row are part of the 2018 CCMP Action Plan, but are not currently identified as part of this current Work Plan are not included. That does not preclude them from being part of partner activities or as part of future Work Plans. Completed tasks are often closely connected to ongoing, similar projects, and/or are part of a larger project. Recent completed tasks from the FY19 Work Plan are identified Appendix A.

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Commented [A24]: Multiple suggestions from different GB and WAC members to not include grey rows in doc to be more succinct and clear

Commented [A25R24]: Incorporated

The following table summarizes the primary work activities planned for FY20. Additional information can be found on TBF or SMBRC's websites, the 2018 CCMP Action Plan, and as part of individual products for each project. There will be updates on each of the CCMP actions included in this Work Plan as part of the semi-annual reports for FY20. Some actions will have additional deliverables as well (identified in the table).

Commented [A26]: GB suggestion

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| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|---|--|--|--|--|---|------------------------------|---|----------|
| 1 | Acquire open space for preservation of habitat and ecological services | Continued participation on resources agency Technical Advisory Committees | Acquire and/or protect high priority properties that are at risk of development, or provide high diversity, include wildlife corridors, and/or provide socio-economic benefits | Review grant applications, participate in meetings, and attend site visits for Urban Greening, Environmental Enhancement and Mitigation programs. | Resources Agency | Update in NEPORT | Publicly acquire new open space as it becomes available throughout the watershed to promote connectivity, preserve habitat, and sustain ecological services | 5, 6, 7 |
| | | * Bond funded acquisitions | To acquire and protect 91 acres of undeveloped land in Carbon Canyon to prevent development in a fire-prone area and expand recreational opportunities Acquire and/or protect high priority properties that are at risk of development, or provide high diversity, include wildlife corridors, and/or provide socio-economic benefits | Pending approval of Prop. 12 funding by the State Coastal Conservancy, to work with grantees to complete the Carbon Canyon acquisition project funded by Prop. 12 | SMMC, MRCA, NPS, State Parks, MRT, Trust for Public Land | Update in NEPORT | | |
| | | Support partners in identification and prioritization of key acquisition or conservation easement properties | Acquire and/or protect high priority properties that are at risk of development, or provide high diversity, include wildlife corridors, and/or provide socio-economic benefits | Meet with partners to develop list of high priority parcels for acquisition/protection and assist/support in identifying funding sources. | SMMC, MRCA, NPS, State Parks, RCDSMMC , MRT | Update in NEPORT | | |
| 2 | Restore kelp forests in the Bay to improve the extent and condition of the habitat | Implement the rocky reef/kelp forest restoration project | To restore five acres of rocky reef kelp forest by reducing urchin density within barrens to the target 2 urchins per square meter to allow the reestablishment of giant kelp | Partner with fisherman to cull urchin densities within the urchin barrens in targeted locations | NOAA, MSRP trustees, NMFS, Vantuna Research Group, Commercial Sea Urchin Harvesters | Annual Report (Kelp Project) | Restore 150 acres of kelp forest to improve habitat functions, local fisheries, and coastal resilience | 6 |

Commented [A28]: Updated based on Prop. 12 project list

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Commented [A30R29]: Incorporated

Commented [A31]: GB suggestion

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| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|---|---|---|---|--|---|------------------------------|--|----------|
| | | Biological response monitoring of restoration areas | To track the response of the kelp forest community after restoration activities occur | Conduct pre-restoration monitoring of urchin barrens and post-restoration monitoring of resulting kelp forests; complete annual surveys of reference and restored sites; produce annual report | VRG | Annual Report (Kelp Project) | | |
| 3 | Recover abalone populations in the Santa Monica Bay and region to support rare species and socioeconomic benefits to people | Establish abalone outplanting sites and conduct juvenile and larval outplanting | To reintroduce abalone and test effectiveness of outplanting methods | Conduct habitat suitability surveys for outplant sites; implement one red abalone outplant event and one white abalone outplant event (permit pending) in established restoration site | NOAA, NMFS, Cal Poly Pomona, SCMI, NFWF Bodega Marine Lab, SFSC, Paua Marine Research Group | Annual Report (Abalone) | Establish 2-3 <u>minimally viable</u> green and red abalone populations (<u>i.e.</u> , at least 2,000 abalone per hectare) in the Bay; <u>establish</u> 1-2 viable white abalone populations (<u>i.e.</u> , at 2,000 abalone per hectare) in the Bay | 6 |
| | | Monitor abalone restoration and reference sites | To conduct SCUBA-based surveys within outplant sites to assess the survivability of outplanted abalone and suitability of the site for future outplanting efforts | Conduct surveys to collect re-encounter rates, growth data, and genetic samples of outplanted abalone | NOAA, NMFS, Cal Poly Pomona, SCMI, NFWF Bodega Marine Lab, SFSC, Paua Marine Research Group | Annual Report (Abalone) | | |
| | | Captive spawn abalone | To research captive spawning and larval culturing techniques, and raise abalone in aquaculture facility for outplanting | Condition broodstock abalone and conduct four captive spawning events | SCMI, NOAA, NMFS, Cal Poly Pomona | Annual Report (Abalone) | | |

Commented [A33]: GB comment: confusion of what “minimally viable” means (NEP response: clarification already in outcome – i.e., at least 2,000 abalone per hectare)

GB other suggestion re: changing wording not incorporated because wording translates to the Abalone Recovery Plan

Commented [A34]: GB comment: didn’t understand this wording

Commented [A35R34]: Detailed description of wording in “objective” column. Standard language pulled from CCMP Action Plan directly

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|---|---|--|---|--|-----------------------------------|------------------------------------|--|----------|
| | | Maintain aquaculture facility for abalone | To facilitate captive spawning and rearing of red, and green, and white abalone in support of future restoration activities for outplanting in the wild | Complete the renovation of the abalone laboratory to house endangered white abalone and increase program wide capacity for culturing and rearing white abalone larvae; conduct daily water quality testing and husbandry tasks | SCMI, NOAA, NMFS, Cal Poly Pomona | Update in semi-annual report | | |
| 4 | Assess and restore seagrass habitats in the Santa Monica Bay and nearshore environments to benefit marine ecosystems and improve coastal resilience | Survey the extent and condition of seagrasses in the Bay using R2Deep2, side-scan sonar, and SCUBA divers to inform the Comprehensive Monitoring Program | To survey the extent and condition of seagrasses in the Bay using R2Deep2, side-scan sonar, and SCUBA divers to inform the CMP and restoration activities | Complete at least one ROV or SCUBA survey in the Malibu eelgrass beds to inform the extent (area) of the beds (patches) and inform condition using SAV TAC-recommended protocols | Paua Marine Research Group, SCC | Update in semi-annual report | Restore 2-5 acres of seagrasses to the Bay to improve habitat functions and coastal resilience | 6 |
| | | * Develop restoration methods for eelgrass (<i>Zostera pacifica</i>) in the Santa Monica Bay | To improve understanding and probability of success for offshore eelgrass restoration using transplant methods | Assist UCLA class in completing a final report studying historical eelgrass in the Santa Monica Bay, past and current stressors, and recommendations for appropriate restoration transplant methods; use recommendations to inform an Implementation and Monitoring Plan for the pilot restoration project (below) | Paua Marine Research Group, SCC | Implementation and Monitoring Plan | | |
| | | * Conduct pilot restoration project(s) of offshore eelgrass in the Bay | To conduct a pilot restoration project of offshore eelgrass in the Bay within a one-acre footprint | Use information gathered as part of other next steps in this action to finalize methods and inform the application for a Scientific Collecting Permit for eelgrass restoration | Paua Marine Research Group, SCC | Acquire permits | | |
| | | * Evaluate restoration potential of seagrasses in the Bay, harbor, wetlands, | To improve understanding and probability of success for seagrass restoration projects | Support CRI in initiating a genetic population research study of eelgrass (<i>Z. pacifica</i> targeted) in | CRI, UCLA | Update in semi-annual report | | |

Commented [A36]: GB comment: The objective is targeting red and green abalone, but the description mentions renovating the lab housing white abalone.

Commented [A37R36]: Incorporated – see Objective addition

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|---|--|---|--|---|--|--|--|----------|
| | | and nearshore environments | | the region using microsatellite genotyping | | | | |
| 5 | Assess and implement offshore artificial reefs to benefit marine ecosystems and provide socioeconomic benefits to people | * Implement <u>rocky</u> reef restoration project off Palos Verdes | To restore <u>69 acres of rocky</u> reef habitat lost to landslides activity using high relief rocky modules that will resist future burial <u>from sediment deposition</u> | Pending approval of Prop. 12 funding by the State Coastal Conservancy, Complete the environmental review and obtain permits to implement the rocky reef restoration project off Bunker Point <u>funded by Prop. 12</u> | <u>SCM</u> , Vantuna Research Group, PV MSRP, NOAA, <u>SCC</u> | Completed permits; <u>update in semi-annual report</u> | Implement artificial reef projects to achieve 69 new acres of rocky reef habitat of a similar condition as reference reef habitats | 6 |
| | | * Annual monitoring with the use of side scan sonar and SCUBA based surveys | To assess nearshore coastal marine habitats using side-scan sonar and SCUBA to inform data gaps in the CMP and future restoration projects | Support Vantuna in development of baseline monitoring plan to inform restoration activities | Vantuna Research Group, PV MSRP, NOAA | Update in semi-annual report | | |
| 6 | Restore coastal strand and foredune habitat to beaches and sandy shores to improve coastal resilience | Continue long-term monitoring of the Santa Monica Beach Restoration Pilot Project | Continue long-term monitoring to inform coastal resilience, ecosystem benefits, and adaptive management of the restoration area | Conduct physical and biological surveys at the frequency described in the Implementation and Monitoring Plan and produce an annual report | City of Santa Monica, State Parks, Audubon | Annual Report | Restore 10 acres of <u>ecologically functioning</u> | 6 |
| | | Conduct Phase 1 (outreach and planning) and Phase 2 (implementation) of the Malibu Living Shoreline Project | Restore 3 acres of beach and dune habitat to improve coastal resilience and ecosystem benefits and improve public engagement | Continue partnership development, outreach, and monitoring surveys; apply for restoration permits with partners and implement restoration project | City of Malibu, LACDBH, SCC | Annual Report | coastal strand and dune habitat along Santa Monica Bay beaches to <u>improve</u> | |
| | | * Find funding for and implement another beach and bluff restoration project | Restore 3.5 acres of bluff, beach, and eelgrass habitat as part of a living shoreline pilot project; restore dune habitats in Manhattan Beach through iceplant removal and revegetation with native plants | Begin partnership development, permitting, and stakeholder coordination for living shoreline restoration project and Manhattan Beach project | City of LA, SCC, City of Manhattan Beach, City of Malibu, LACDBH | Update in semi-annual report | <u>ecological function</u> , increase coastal resilience, and <u>as provide</u> habitat for rare species | |

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| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|---|---|---|--|--|--|------------------------------|---|----------|
| | | Support efforts to standardize sandy beach monitoring and a regional approach to restoration | Continue efforts to standardize sandy beach monitoring and data collection for southern California through stakeholder partnerships and CMP implementation | Participate in the Beach Ecology Coalition group, continue stakeholder communications, continue Healthy Beaches project in partnership with CRI, continue monitoring and data collection efforts | Beach Ecology Coalition, CRI, SCC, others | Update in semi-annual report | | |
| 7 | Restore and maintain the entire LAX Dunes system to support native plants, wildlife, and rare species | Conduct community restoration events in the northern 48-acre dune area | Engage community through hands-on stewardship and habitat restoration through events held at the LAX Dunes | Recruit, train, and educate community volunteers to conduct non-native vegetation removal at LAX Dunes events | LAWA, FOLD, SCC, CCC | Annual Report (LAX Dunes) | Restore 48 acres of LAX Dune system to improve native dune functions and provide habitat for rare species; Maintain larger 300-acre Preserve to benefit rare species and dune plants and wildlife | N/A |
| | | Support LAWA in long-term maintenance and adaptive management of the 48-acre northern dune area | Continue and strengthen partnership with LAWA to restore and maintain the LAX Dunes | Conduct restoration through non-native vegetation management, native plant programs, restoration training, and monitoring | LAWA, LACC, RSABG, Psomas, CRC, IOEI | Annual Report (LAX Dunes) | | |
| | | Engage underserved students and volunteers and inland communities | Recruit underserved students and volunteers, particularly from inland communities, to participate in hand-on stewardship and restoration at the LAX Dunes | Enhance volunteer program to increase recruitment of underserved students and volunteers from inland communities through amplified outreach, capacity building, and partner development | LAWA, SCC, LACC | Annual Report (LAX Dunes) | | |
| | | * Initiate planning for areas within the adjacent dunes, including baseline monitoring | Conduct baseline monitoring and develop recommendations for habitat management | Implement monitoring protocols to develop baseline data and restoration recommendations for adjacent 52-acre dune area | LAWA, LACC, RSABG, Psomas, CRC, IOEI, CRI | Annual Report (LAX Dunes) | | |
| 8 | Restore coastal bluff habitats in the Bay watershed to support | * Use Beach Bluff Restoration Master Plan to explore bluff restoration and continue recovery of El Segundo Blue Butterfly | To provide habitat and ecological benefits in support of the recovery and eventual delisting of the endangered El Segundo Blue Butterfly and to restore bluff habitats | Continue partnership and stakeholder coordination, data consolidation, and development of adaptive management recommendations and actions | USFWS, CDFW, LAWA, City of LA, Friends of Ballona, PVPLC, others | Update in semi-annual report | Restore 5 acres of bluff habitats in the SMB watersheds to support | N/A |

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|----|---|--|--|--|---|---|--|----------|
| | ecosystem services | * Identify partners and funding to support bluff restoration projects | To establish project partners, project sites, and identify potential funding sources in support of bluff restoration | Continue to identify and coordinate with project partners, agencies, and stakeholders to prioritize project locations; identify and apply for potential funding sources for bluff restoration | PVPLC, State Parks, many others | Update in semi-annual report | ecosystem services | |
| | | * Initiate restoration of one bluff restoration project | To restore 13 acres of rare coastal bluff habitat to support threatened and endangered wildlife and plant species, reduce coastal erosion, improve water infiltration, and enhance public access. To initiate one bluff restoration project in the Bay watersheds | Identify a potential bluff restoration site and begin project development and coordination with stakeholders; apply for permits, if necessary. Begin implementation of the Abalone Cove Habitat Restoration Project funded by Prop. 12 and led by PVPLC | SCC, PVPLC, City of LA, LADBH, USFWS | Update in semi-annual report | | |
| 9 | Implement Malibu Creek Ecosystem Restoration Project (Rindge Dam and other barrier removals) to support ecosystem restoration | Support lead agencies in efforts to complete the design and engineering plans for the Malibu Creek Ecosystem Restoration Project | Develop design and engineering plans to remove Rindge Dam and additional barriers, to restore terrestrial and aquatic habitat connectivity and establish natural sediment transport regime | Meet with lead agencies (State Parks, Army Corps) to identify additional technical support and funding needs | State Parks, Army Corps | Update in semi-annual report | Complete implementation of the Malibu Creek Ecosystem Restoration Project including the removal of barriers to improve stream and riparian habitats and to benefit the steelhead trout | 5, 6, 7 |
| 10 | Remove additional barriers to support fish migration and ecosystem services | <u>Identify, prioritize, and acquire funding for barrier removal projects</u> | <u>To engage with partner entities to identify potential opportunities for fish barrier removal</u> | <u>Opportunistically attend meetings and engage in conversations to advance project prioritization and funding</u> | <u>RCDSMM, State Parks, NPS</u> | <u>Update in semi-annual report</u> | Remove fish barriers to support endangered steelhead trout habitat expansion, | 2, 5, 6 |

Commented [A42]: NEP staff suggested changes in this row based on approved Proposition 12 list of projects and conversations with partners

Commented [A43]: NEP staff suggested additions in this row based on conversations with partners

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|---|--|---|--|---|-------------------------------------|--|------------|
| | | | | | | | increase resilience related to climate change, and provide ecosystem services | |
| 1 1 | Restore urban streams, including daylighting culverted streams, removing cement channels, and restoring riparian habitats | Identify additional urban streams for restoration and prioritize actions | <u>To engage with partner entities to identify potential opportunities for urban stream restoration</u> | <u>Opportunisticly attend meetings and engage in conversations to advance project prioritization and funding</u> | <u>Municipalities, USC Sea Grant, others</u> | <u>Update in semi-annual report</u> | Restore at least two priority stream areas as defined by guiding documents such as the Ballona Creek Greenway Plan | 2, 4, 5, 6 |
| 1 2 | Restore smaller coastal lagoons and other wetland types to increase wetland habitat area and condition throughout the watershed | Complete the final post-restoration assessment of the Malibu Lagoon Restoration and Enhancement Project | To assess the condition of the restoration project for a five-year period and evaluate the data against set success criteria | Complete the collection, consolidation, and evaluation of five or more years of physical, chemical, and biological monitoring data and produce a Final Evaluation Report | State Parks | Final Report | Restore and increase wetland and transition habitat acreages for small lagoons such as Topanga Lagoon and | 2, 5, 6 |
| | | Finalize restoration planning and permitting for Topanga Lagoon restoration project and initiate project | <u>To create a restored habitat that integrates fish passage barrier removal, wetland habitat restoration, visitor services, and recreational opportunities at Topanga Lagoon</u> | <u>Continue working on restoration design alternatives and CEQA permitting and documentation funded by Prop. 12</u> | <u>State Parks, SCC, RCDSMM, CalTrans, Army Corps, City of Malibu</u> | <u>Update in semi-annual report</u> | other wetland systems to improve ecological functions | |

Commented [A44]: NEP staff suggested additions in this row based on conversations with partners

Commented [A45]: NEP staff suggested changes in this row based on approved list of Proposition 12 projects and conversations with partners

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|---|--|---|--|-------------------------------------|---|------------|
| | | Conduct comprehensive monitoring of small lagoons in northern Bay to inform CMP and seek funding to continue Malibu Lagoon monitoring | To conduct comprehensive monitoring of the northern Bay lagoons, inform the Comprehensive Monitoring Program (wetlands chapter), and acquire funding to continue long-term monitoring and data collection at Malibu Lagoon | Apply for funding to continue surveys and conduct new surveys to inform CMP and wetland condition trends for our region; consolidate existing data for northern lagoon systems; collect new data to fill identified gaps | Moss Landing Marine Labs, CRI, State Parks, RCDSMM | Update in semi-annual report | | |
| 1 3 | Restore Ballona Wetlands Ecological Reserve to enhance wetland habitats and benefits to people | Support the lead agencies by contributing technical information to the Final Environmental Impact Statement and Report and permitting | To support the lead agencies in completing and releasing the Final Environmental Impact Statement / Report and complete permitting | Continue to provide technical support and communication with the lead agencies to restore Ballona Wetlands | CDFW, Army Corps | Update in semi-annual report | Restore 577-acre Ballona Wetlands Ecological Reserve to improve wetland, transition, and upland habitats, functions, and services; Create public access trails and bike paths and encourage recreation and stewardship at the Ballona Wetlands Ecological Reserve | 2, 5, 6, 7 |
| | | Continue community engagement and hand-restoration within the Reserve with FBW | To restore four acres of degraded wetland and transition habitat at the Ballona Wetlands Ecological Reserve through community restoration | Continue to conduct community restoration events and biological monitoring in accordance with permits (TBF and FBW); produce an annual report; <u>expand restoration activities in accordance with stewardship project funded by Prop. 12 (includes two acres of wetland and adjacent transitional habitat)</u> | CDFW, Friends of Ballona Wetlands, SCC | Annual Report | | |
| 1 4 | Implement wildlife crossings and other innovative projects for | Support lead agencies to find funding for Phase 2 of the Liberty Canyon Wildlife Crossing project | <u>To implement Phase 2 of the Liberty Canyon Wildlife Crossing Project in support of wildlife movement and safety and enhanced habitats</u> | <u>Attend meetings and conduct other communications and outreach activities to support implementation of Phase 2</u> | <u>RCDSMM, Assm. Bloom, MRCA, SCC, CalTrans</u> | <u>Update in semi-annual report</u> | Complete construction and implementation of two major freeway wildlife | N/A |

Commented [A46]: WAC member suggested additional detail here. See additional information here and in "comment/response" document. Scope of text here is consistent with other actions/projects in the Work Plan. Additional details will be available in reporting documents.

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| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|--|--|---|---|--|---|------------------|
| | benefits to wildlife and people | Support lead agencies in permitting and environmental review of Liberty Canyon Wildlife Crossing project | <u>To complete implementation of the Liberty Canyon Wildlife Crossing Project in support of wildlife movement and safety and enhanced habitats</u> | <u>Attend meetings and conduct other communications to support the implementation of the Liberty Canyon Wildlife Crossing project</u> | <u>RCDSMM, Assm. Bloom, MRCA, SCC, CalTrans.</u> | <u>Update in semi-annual report</u> | crossing projects to benefit wildlife, genetic diversity, and people | |
| 1 5 | Implement projects that improve understanding and/or enhance endangered and threatened species populations (e.g. habitat improvements for Western Snowy Plover, genetic banking) | * Support restoration and monitoring activities to benefit California red legged frog populations | Improve riparian and stream habitats to support populations of California red legged frog | <u>Pending approval of Prop. 12 funding by the State Coastal Conservancy, w/</u> Work with grantees to implement the <u>California red legged frog reintroduction project funded by Prop. 12</u> | NPS, SCC, State Parks, RCDSMM | Update in semi-annual report | Improved extent and condition of habitats for rare species throughout the Bay and its watershed | 2, 5, 6 |
| | | * Support projects within western snowy plover critical habitat | To provide habitat and ecological benefits in support of the threatened Western Snowy Plover and to restore critical habitat | Continue beach and dune restoration projects and continue to inform management actions in support of ecological benefits to the plovers | LACDBH, City of Santa Monica, City of LA, City of Malibu, Audubon | Update in semi-annual report | | |
| 1 6 | Support the implementation of activities and projects such as those in Enhanced Watershed Management Plans (EWMPs) and activities identified in the TMDL implementation | Continue to support implementation of projects identified in EWMPs and WMPs | <u>Allocate and oversee State Bond funding for implementation of projects identified in EWMPs and WMPs</u> | <u>Recommend awards and oversee implementation of capital and monitoring projects for storm water pollution reduction through multi-benefit solutions. Inform and support the Storm Water Strategy efforts led by the SWRCB</u> | <u>SWRCB, municipalities</u> | <u>Update in semi-annual report; project final reports</u> | Assist in achieving constituent percentage load reduction targets for waterbodies in the Santa Monica Bay according to TMDL compliance timeline | 1, 2, 4, 5, 6, 7 |
| | | Continue implementation of LA IRWMP | Facilitate and support allocation of IRWMP funding and implementation of projects identified in EWMPs and WMPs in the watershed | Continue to participate in activities of the Greater Los Angeles IRWRP Leadership Committee and the South Bay and North Bay Sub-Region Steering Committees | LA County Flood Control District | Update in semi-annual report | | |

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Commented [A50]: This row = GB suggestions

Commented [A51R50]: Incorporated

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|---|---|---|--|---|------------------------------|---|---------------|
| | schedule to help achieve TMDL goals for 303d listed waterbodies in the Bay and its watershed | Facilitate other sources of State funding | Facilitate and support allocation of funding from other State bond measures such as Prop. 1 and 65 for implementation of projects identified in EWMPs and WMPs in the watershed | Outreach and support project applications by municipalities where appropriate, and keeping the SMBRC Governing Board and membership informed of progress made | municipalities | Update in semi-annual report | | |
| 1 7 | Infiltrate, capture, and reuse stormwater and dry-weather runoff through green infrastructure, LID, and other multi-benefit projects and improve understanding of ecosystem services provided | Complete rain garden metal fate study with CRI | To assess the fate of sequestered or retained heavy metals in the Culver City Rain Garden | Complete the Masters thesis for the rain garden metal fate study in partnership with CRI | CRI | Completed Masters Thesis | Assist in achieving constituent percentage load reduction targets for waterbodies in the Santa Monica Bay according to TMDL compliance timeline | 2, 4, 5, 6, 7 |
| | | | | Continue to work with grantees to implement previously funded Prop. 84 projects: Culver Boulevard Realignment and Stormwater Infiltration/Retention Regional Project, Westwood Neighborhood Greenway Project, Santa Monica Bay Catch Basin Insert Project, and Ladera Park Water Quality Enhancement Project; pending approval by SCC, work with grantees to implement three new Prop. 12 projects: Monteith Park Storm Water Capture, Beach Cities Green Streets, and Paramount Ranch Storm Flow and Sediment Reduction | City of LA, City of Torrance, LA County, other watershed cities, LA County, NPS | Update in semi-annual report | | |
| | | Complete additional LID projects throughout the watershed | Complete more LID projects throughout the watershed to improve flood protection and water quality, and provide additional benefits | | | | | |
| 1 8 | Support installation and monitoring of | Continue quarterly monitoring of public sewage pumpout stations | To assess the condition of public sewage pumpout stations | Conduct quarterly monitoring of public sewage pumpout stations in Southern California harbors | TBF, CDBW, marina operators | Annual Report | Meet 86-100% annual average usability | 4 |

Commented [A52]: GB comment: stormwater actions are underrepresented.

Commented [A53R52]: Incorporated – See addition to Action 16

Commented [A54]: GB suggestion

Commented [A55R54]: Incorporated

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|---|---|--|--|-----------------|------------------------------|--|----------|
| | additional sewage and bilge pumpout facilities in Southern California harbors | Update CA Vessel Waste Disposal Plan | To assess the existing sewage management infrastructure and need for additional sewage management resources in Southern California harbors for vessels | Use assessments and monitoring data to inform an update to the CA Vessel Waste Disposal Plan document | TBF, CDBW, SFEP | Updated plan document | percentage (based on analysis of equipment performance) for all publicly funded sewage pumpout stations throughout Southern California | |
| 1 9 | Support minimization of biological impacts of water intake and discharge from coastal power generation and seawater desalination facilities, including public engagement and education | Educate and increase public support of the state-wide desalination policy requirements | Support efforts by state regulatory agencies to achieve full implementation of the state-wide desalination policy requirements in the California Ocean Plan and Once-Through Cooling Policy | Monitor and inform SMBRC Governing Board, other stakeholders, and the general public on the implementation of the requirements in the California Ocean Plan desalination and Once-through Cooling Policy for facilities along the Santa Monica Bay coastline Monitor and inform SMBRC Governing Board, other stakeholders, and the general public on the status of state-wide desalination policy implementation by coastal power generation stations along the Santa Monica Bay coastline | SWRCB | Update in semi-annual report | Achieve no impacts from seawater intake of desalination facilities, including brine disposal, and ultimately no seawater intake | 6, 7 |

Commented [A56]: GB suggestions in this row

Commented [A57R56]: Incorporated

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|----|--|---|---|--|-----------------------------------|-------------------------------------|--|------------|
| 20 | Support elimination of non-point pollution from onsite wastewater treatment systems | Continue the coordinated OWTs identification, permitting, and inspection system between the LARWQCB and the cities and counties in the watershed | Continue to support efforts by the LARWQCB and cities and counties to achieve full implementation of the statewide policy for siting design, operation, and maintenance of OWTs | Monitor and inform the SMBRC Governing Board membership, other stakeholders, and the general public on the progress made by the LARWQCB and cities and counties in implementation of the state-wide policy for siting design, operation, and maintenance of OWTs | LARWQCB, watershed municipalities | Update in semi-annual report | Achieve level of performance and water quality protection set by state policy for all OWDs in the Santa Monica Bay watershed | 4, 5, 6, 7 |
| 21 | Support policies that promote reuse, recycling, and advanced wastewater treatment to reduce reliance on imported water sources | Support recycled wastewater efforts by JWPCP of LACSD | To support expansion of wastewater effluent recycling by JWPCP of LACSD | Monitor and inform the SMBRC Governing Board membership, other stakeholders, and the general public on the progress made by JWPCP LACSD in expansion of wastewater recycling | LACSD | Update in semi-annual report | Help reduce dependence of the Los Angeles region on imported water and lower the percentage of imported water use by water agencies; <u>work towards meeting the State's goals for recycled water in the Recycled Water Policy</u> | 4, 6, 7 |
| | | Hyperion Treatment Plant to implement pilot project for recycled water | To support timely completion of Hyperion's pilot project | Monitor and inform the SMBRC Governing Board membership, other stakeholders, and the general public on the implementation progress of Hyperion's water recycling pilot project | LASAN | Update in semi-annual report | | |
| | | Support recycled wastewater efforts by Tapia Water Reclamation Facility and others through expansion of distribution system and regional partnerships | To support expansion of <u>recycled wastewater distribution and reuse</u> | <u>implement the indirect potable water reuse demonstration project for reservoir augmentation, i.e., the Las Virgenes-Triunfo Pure Water Project, funded by Prop. 12</u> | <u>LVMWD, SCC</u> | <u>Update in semi-annual report</u> | | |

Commented [A58]: GB suggestion

Commented [A59R58]: Incorporated

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|---|---|---|---|--|-------------------------------------|--|----------|
| 2 2 | Support policies and implement projects that divert landfill waste and encourage composting to improve water quality and lower greenhouse gas emissions | Support continuation of Table to Farm compost hubs | Reduce food waste being sent to landfills, compost food waste, and apply compost to urban gardens to grow food | Apply for funding to continue program, identify additional partners (schools and businesses), build an additional compost hub, and support existing compost hubs and program partners | Schools, Social Justice Learning Institute, Restaurants, LA Compost, LA Food Waste Group | Final Report | Establish 10 local community-based compost hubs and divert food waste from 20 food service establishments; distribute compost among community support agriculture, gardens, and restoration projects | 4, 6 |
| 2 4 | Support the inclusion of coastal resilience through natural means and softscape measures into local coastal plan updates | Attend stakeholder meetings for local cities LCP development / updates / implementation | Continue involvement in stakeholder meetings for local cities LCP development and implementation | Attend and participate in stakeholder meetings and workshops related to LCPs and promote the inclusion of natural "softscape" measures as a coastal resilience strategy | LACDBH, municipalities | Update in semi-annual report | Inclusion of climate change adaptation measures in at least half of the 12 local coastal jurisdictions general plans (or equivalent) amendments | 7 |
| | | Opportunistically assist cities in the development of sea level rise vulnerability studies | Identify and partner with cities to develop sea level rise vulnerability studies to strategically recommend coastal resilience strategies | Partner with cities in the development of sea level rise vulnerability studies and recommend natural "softscape" measures be included as adaptation strategies | USGS, municipalities | Update in semi-annual report | | |
| | | Use data collected from beach restoration "softscape" projects to inform and assist LCP development | Provide science-based data to inform LCP development and support beach restoration | Use data from regional beach restoration projects as case studies to inform adaptation solutions and future natural "softscape" projects | LACDBH, municipalities | Update in semi-annual report | | |
| 2 5 | Support best management practices, increased public | <u>Support implementation of identified actions within plans such as the LACDBH</u> | <u>To implement adaptation projects that will improve coastal resilience</u> | <u>Develop and begin implementation of coastal adaptation projects that address sea level rise and planning efforts</u> | <u>LACDBH, SCC, City of Los Angeles, City of Manhattan</u> | <u>Update in semi-annual report</u> | Improve access to the coast and enhance coastal experiences | N/A |

Commented [A60]: Note: Action #23 deleted because no current next steps were identified for this Work Plan.

Commented [A61]: Suggested addition by NEP staff based on meetings with LACDBH

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|---|---|--|---|-------------------------------------|--|----------|
| | access, and improved public facilities for beaches and other public trail systems to support both enhanced natural resources values and benefits to people | <u>Sea Level Rise Vulnerability Assessment</u> | | | <u>Beach, State Parks</u> | | through linking and expanding the California Coastal Trail; develop and build partnerships that support the implementation of natural infrastructure throughout the Bay watersheds | |
| | | <u>Continue to advise BMPs for beaches that promote habitat condition improvements and support for unique species</u> | <u>To build upon and continue partnerships with groups and agencies to benefit beach habitat conditions</u> | <u>Continue partnerships and active participation with groups and agencies such as LACDBH, Audubon Society, Pepperdine, Beach Ecology Coalition, State Parks, and USFWS to implement and provide recommendations for best management practices along beaches</u> | <u>LACDBH, Pepperdine, Beach Ecology Coalition, beach managers, Audubon, others</u> | <u>Update in semi-annual report</u> | | |
| 2 6 | Participate in research, education, outreach, and policy on invasive species removal and control | Conduct New Zealand Mudsnail surveys | Track the spread of NZMS in the Santa Monica Mountains and develop management recommendations for control | Conduct NZMS survey in Santa Monica Mountains and submit report | Heal the Bay | Biennial Report (2020) | Reduce impact of invasive species in critical habitats throughout the Bay and its watershed as measured by the Comprehensive Monitoring Program | 5, 6, 7 |
| | | Attend and participate in Invasive Species Council of California (ISCC) and regional meetings focused on management of invasive species | Increase public and agency awareness of invasive species issues | Attend one quarterly ISCC meeting and participate in a local California Invasive Species Action Week event | CDFW | Update in semi-annual report | | |
| 2 7 | Produce educational resources and materials and conduct outreach to improve best management practices for Southern California | Produce educational materials | To produce educational materials to increase awareness of boating best management practices to boaters | Produce and distribute Changing Tide newsletters, tide calendar, and boater kits | CCC, CDBW, SFEP | Newsletters, tide calendar | Increase understanding and adoption of sustainable boating habits to reduce boating related pollutants entering waterways (e.g. boat sewage, | 4 |
| | | Conduct outreach | To conduct outreach to increase awareness of boating best management practices to boaters | Conduct direct outreach to boating community at events, presentations, and trainings | CCC, CDBW | Summary table(s) | | |
| | | Manage Pumpout Nav app | Increase proper disposal of boater sewage | Contribute to and support app development and maintenance | CDBW, SFEP | Summary table | | |

Commented [A62]: Suggested addition by NEP staff based on meetings with Beach Ecology Coalition members

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|----|---|---|---|--|---|-------------------------------------|--|----------|
| | boaters (e.g. fuel, sewage, and hazardous waste management) | * Research public engagement metrics and specific engagement tools on reduction of pollutants to waterways | To optimize public engagement resources to increase impact of pollutant reduction strategies to waterways | Compile a literature review | CCC, CDBW | Update in semi-annual report | used oil, antifreeze, bilge water, batteries, copper, trash, and aquatic invasive species) | |
| 28 | Support efforts of disadvantaged communities to achieve healthy habitats, implement green infrastructure, and reduce pollution | Utilize the Ballona Creek Greenway Plan to identify parcels in disadvantaged communities for implementation | <u>To identify opportunities for the creation of parks, parklets, and green corridors</u> | <u>Review and assess the readiness of the Ballona Creek Greenway Plan; participate in Ballona Creek Task Force</u> | <u>City of Culver City, Baldwin Hills Conservancy</u> | <u>Update in semi-annual report</u> | Help disadvantaged communities to achieve healthy habitats through restoration and pollution reduction projects | 4, 6, 7 |
| 29 | Reduce health risks of swimming in contaminated waters and consuming contaminated seafoods through more comprehensive source control and, advanced monitoring and public notification | Continue implementation and improvement of beach water quality monitoring and reporting system | To support Heal the Bay's efforts to standardize beach water quality monitoring and effectively disseminate the information to the public | Continue to update and maintain Heal the Bay's NowCast system and interactive website | Heal the Bay | Update in semi-annual report | Inform agency enforcement plans and long-term adaptive management of MPAs; achieve no elevated health risks associated with swimming and seafood consumption through source control, monitoring, and public notification | 4, 6 |
| | | Maintain and enhance the existing seafood contamination education and enforcement program | Support and facilitate the continuation and enhancement of the existing seafood contamination education and enforcement program | Continue to participate in the Fish Contamination Education Collaborative | EPA Superfund, FCEC partners | Update in semi-annual report | | |

Commented [A63]: Suggested additions by NEP staff based on conversations with partners

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|----|--|--|--|---|--|------------------------------|---|----------|
| 30 | Conduct community engagement, education, and inform policies related to water conservation and reuse to reduce water demand and reliance on imported sources | Link water conservation with outreach events and social media | Opportunistically incorporate water conservation topics during outreach events and on social media | Engage and educate the community and volunteers about local water conservation issues and solutions during restoration events, outreach events, and TBF social media postings | LADWP, MWD, municipalities, many | Update in semi-annual report | Help reduce dependence of the Los Angeles region on imported water and lower the percentage of imported water use by water agencies | 6 |
| | | Educate, engage communities, and provide resources that promote the importance of native plants | Promote the use of drought tolerant native plants | Educate community and volunteers on the importance of using drought tolerant native plants in habitat restoration and residential landscaping | LADWP, municipalities, many | Update in semi-annual report | | |
| | | Support efforts by water agencies to promote water conservation and reuse including dissemination of materials | Promote current information on water conservation and reuse efforts developed by water agencies | Share current water conservation and reuse incentives and goals developed by water agencies to promote the use of these programs and to educate the public | LADWP, municipalities, many | Update in semi-annual report | | |
| | | * Develop funding to support the expansion of best management practices to incorporate other business sectors | To reduce pollution from businesses through implementation of best management practices | Apply for funding to support the expansion of best management practices to incorporate other business sectors | municipalities, businesses | Update in semi-annual report | | |
| 32 | Reduce marine debris by supporting bans on single-use items, conducting outreach, and participating in trash reduction programs | Find funding for and continue ReThink Disposable LA | To contribute to source reduction of single-use disposable items from food service establishments | Apply for funding to continue to implement ReThink Disposable LA | Clean Water Action/ Clean Water Fund, commercial businesses | Update in semi-annual report | Implement ban on single use disposable plastics in Los Angeles County and 100% of cities throughout watershed; engage 30 food service establishments as ReThink Disposable participants | 4 |
| | | Support municipality bans of polystyrene, non-recyclable plastics, and single use items | To contribute to source reduction of polystyrene, non-recyclable plastics, and single use items | Participate in LA Polystyrene Coalition and submit letters of support to city councils for proposed bans; support efforts of Surfrider in ban establishment | municipalities, Surfrider Foundation, Heal the Bay, 5 Gyres, Algalita, OPC, NOA, USEPA, other stakeholders | Summary Table | | |

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|--|--|---|-------------------------------|-----------------------------------|---|------------|
| 3 3 | Monitor microplastics (including microfibers) and other marine debris in the Bay and coastal environments to inform management actions | Complete the development of a microplastics in sediment extraction and analysis method | To complete the development of a microplastics in sediment extraction and analysis method | Complete and publicly release the protocol as a report or manuscript in a scientific journal | CRI | Final Method Report or manuscript | Use microplastics data analyses and identified trends to inform source reduction management strategies in the Bay | 4 |
| | | Publish a manuscript on the results of the Bay studies | To publish a manuscript on the results of the Bay microplastics studies | Continue data collection, analyses, and evaluation to inform a future manuscript | CRI | Update in semi-annual report | | |
| | | Conduct additional studies to inform the transport, accumulation, and fate of microplastics in our marine and nearshore environments | To continue to collect data to inform the regional fate and transport model of microplastics in the nearshore marine environment | Apply for funding to continue data collection, analyses, and evaluation regarding microplastics fate and transport | CRI | Update in semi-annual report | | |
| 3 4 | Improve understanding of emerging contaminants through monitoring and research to inform source control and reduce loading (e.g. fire retardants), especially in the context of climate change | Improve analytical methodology and standardize monitoring of more emerging contaminants | To update and implement State-wide recommendations for monitoring of emerging contaminants in aquatic ecosystems | Support State Water Board's effort to re-convene the Science Advisory Panel to make new recommendations for monitoring CECs in aquatic ecosystems | SWRCB | Update in semi-annual report | Reduce impacts of emerging contaminants on key habitats in the Bay and its watersheds | 4 |
| 3 5 | Monitor and inform management actions for Harmful Algal Blooms (HABs) | Continue to support research and monitoring efforts for HABs, especially in context of climate change and CMP implementation | To support research and monitoring efforts that fill data gaps in our region for HAB occurrences, frequencies, causes, and impacts | Explore emerging technologies like remote sensing to better understand and fill data gaps related to HABs | SCCWRP, CRI, JPL/NASA, SCCOQS | Update in semi-annual report | Reduce prevalence of HABs in the Bay and its waterbodies as measured by the | 4, 5, 6, 7 |

Commented [A64]: GB suggestions in this row

Commented [A65R64]: Incorporated

Commented [A66]: NEP staff suggested addition based on conversations with partners

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|--|--|---|-------------------------------------|------------------------------|--|----------|
| | | Conduct monthly maintenance of SCCOOS shore station at Santa Monica Pier and seek support for additional sensors | To inform long-term water quality trends in the Bay's nearshore environment and contribute data to the Comprehensive Monitoring Program | Continue monthly maintenance, calibration, data downloads, and interactive data web portal for the SCCOOS Santa Monica Pier station | SCCOOS, LA Waterkeeper | Update in semi-annual report | Comprehensive Monitoring Program | |
| 3 6 | Monitor chemical, physical, and biological characteristics in the Bay to inform climate change impacts such as ocean acidification | Implement the Kelp Forest Hydrodynamic Study | To assess sediment transport, alteration of advective currents, and wave attenuation within kelp forests | Establish one new study site, conduct kelp density surveys, and assist with instrument maintenance and data download | UC Davis, CSU Northridge, UCLA IoES | Update in semi-annual report | Development and implementation of adaptation strategy addressing impacts of ocean acidification in the Bay | 6, 7 |
| | | Support OA sensor array maintenance, calibration, and data downloads in accordance with SOP | Continue using high-frequency, high-resolution OA sensors to characterize OAH conditions in Santa Monica Bay | Redeploy the OA sensors in collaboration with LACSD wire-walker mooring special study to accurately collect real-time data at high-resolution, both temporally and vertically through the water column, and characterize OAH levels and variability in the upper 100m of the Santa Monica Bay | LACSD, LARWQCB, SCCWRP | Update in semi-annual report | | |
| | | Support inclusion of climate change impacts into CMP, especially through new models and data | To include climate change into the Comprehensive Monitoring Program including new models and data | Continue drafting and release the final Comprehensive Monitoring Program including subsections on climate change for each major habitat in the Bay and its watershed | TAC, CRI, many others | Final CMP | | |
| | | Convene technical advisors to prioritize actions based on information from CMP | To prioritize monitoring and data collection needs based on the revised CMP for major habitats in the Bay and implement the prioritized monitoring protocols | Once revised CMP is released, prioritize data gaps by major habitat with support of scientific advisors, acquire funding, and implement monitoring protocols | TAC | Update in semi-annual report | | |

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|--|---|---|--|-------------------------------------|--|----------|
| 3 7 | Increase understanding of deep water habitats such as submarine canyons, deep reefs, and outfall pipes | * Conduct ROV surveys to collect physical, chemical, and visual data | Use the ROV to conduct underwater surveys to supplement monitoring | Develop ROV use protocols, explore sensor integration, and deploy the ROV to collect physical, chemical, and visual data | TAC | Final Protocol | Enhance functions and conditions of deep marine environments (e.g. deep reefs) in the Bay | 6 |
| | | Identify and apply emerging technology and techniques to better characterize Bay habitats, including recommendations | <u>Utilize cutting edge advancements in remote sensing, and remote platforms to better characterize the condition of the Bay's habitats</u> | <u>Contribute to the development and deployment of next gen data collection platforms to assess health of the Bay's habitats</u> | <u>TAC, USC Sea Grant, SCMI, CRI, Blue Robotics, City of LA EMD, LA CO Sanitation Districts, CRI</u> | <u>Update in semi-annual report</u> | | |
| 3 8 | Monitor and improve understanding of rocky intertidal habitats to inform restoration actions | Support study recommendations and outreach efforts for improved protection | <u>To improve understanding of rocky intertidal habitats to fill CMP data gaps and inform restoration activities</u> | <u>Continue to support Point Fermin rocky intertidal study; explore marine invertebrate physiological response to climate stressors</u> | <u>UCLA, CRI, MARINe</u> | <u>Update in semi-annual report</u> | Implementation of the Comprehensive Monitoring Program to achieve a better understanding of the extent and condition of habitats in the Santa Monica Bay and its watershed | 6 |
| 3 9 | Monitor and inform effective management of Marine Protected Areas, Fishery Management Plans, and local fisheries for | Support MDRA in their implementation of the youth and veteran fishing program | Provide disadvantaged youth and veterans the opportunity to experience nature, boating, and fishing and encourage sustainable lifestyles | Support MDRA by soliciting volunteers for boat trips as needed | Marina del Rey Anglers, TBF | Update in semi-annual report | Inform agency enforcement plans and long-term adaptive management of MPAs, assist with fishery related public health advisories | 6 |
| | | Support MDRA in the completion of a halibut FMP | <u>To provide technical and outreach support to MDRA in the development of a halibut FMP</u> | <u>Support MDRA in their efforts by reviewing project documents, providing technical support, and attending meetings</u> | <u>Marina Del Rey Anglers</u> | <u>Update in semi-annual report</u> | | |

Commented [A67]: NEP staff suggestions in this row based on conversations with partners

Commented [A68]: NEP staff suggestions in this row based on conversations with partners

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|----|--|---|--|---|------------------------------------|-------------------------------------|---|----------|
| | recreational and commercially important species | Continue opportunistic aerial surveys to track boating and vessel activity | Continue to track ocean vessels and fishing trends within the South Coast MPA Network | Conduct quarterly aerial surveys of the coast from Point Conception to the Mexican Border recording boat type, location, and activity (if funded or donated by LightHawk) | Lighthawk | Update in semi-annual report | | |
| | | Conduct MPA Watch to monitor and inform use of MPAs in the Bay | To implement a community-science based program to monitor activities in MPAs and encourage appropriate enforcement and regulation activities | Train MPA Watch volunteers, conduct shore-based surveys, and share data with local enforcement agencies | Heal the Bay, LA MPA Collaborative | Update in semi-annual report | | |
| 40 | Research and inform best management and pollution reduction practices to address non-point source pollution and facilitate reduction | Identify partners and identify funding sources for long-term monitoring efforts for LID and water conservation efforts | Implement the SMB Comprehensive Monitoring Program | Work with SWRCB to develop and execute grant(s) to implement appropriate tasks in the CMP | LA County, municipalities | Update in semi-annual report | Assist in achieving constituent percentage load reduction targets for waterbodies in the Santa Monica Bay according to TMDL compliance timeline | 4 |
| | | Implement monitoring programs for long-term monitoring and to inform effectiveness of LID/BMP implementation projects | <u>To fill data gaps and inform LID/BMP effectiveness</u> | <u>Continue ongoing TAC conversations and review of Prop. monitoring plans; opportunistically explore ways to conduct additional monitoring of stormwater implementation projects</u> | <u>TAC, CRI, municipalities</u> | <u>Update in semi-annual report</u> | | |
| 42 | Inform strategies to reduce greenhouse gas emissions and increase carbon sequestration in support of existing state actions and policies | * Conduct research to establish rate of carbon sequestration associated with key habitats in the Santa Monica Bay and its watershed | Conduct research to identify processes and metrics to further understand rates of carbon sequestration within key habitats in Santa Monica Bay and its watershed | Collaborate with partners and leverage beach and eelgrass restoration projects to conduct research that contributes towards understanding carbon sequestration processes and rates | SCC, local cities, CRI, others | Update in semi-annual report | Implement and support carbon sequestration/cycle monitoring, research, and quantification as part of projects to inform or prioritize efforts | N/A |

Commented [A69]: NEP staff suggestions in this row based on conversations with partners

Commented [A70]: Note: Action #41 was deleted based on no projects or next steps identified for this Work Plan time period

| # | CCMP Action | CCMP Next Step(s) / Project Activity Name | Objective(s) | Description / Milestone Summary | Partner(s) | Outputs / Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core |
|--------|--|---|---|---|---|-------------------------------------|---|----------|
| 4 3 | Implement the County-wide Safe Clean Water Program to support stormwater pollution control projects (if approved by voters in 2018) | Participate in advisory board and support implementation of projects from the new funding mechanism | <u>To improve stormwater management in urban areas and reduce stormwater pollution through attainment of water quality objectives, increased stormwater retention, and increased service to disadvantaged communities</u> | <u>Support the efforts of agencies to utilize funds made available under Measure W for stormwater improvement and LID projects throughout the watershed</u> | <u>LA County, municipalities</u> | <u>Update in semi-annual report</u> | Assist in achieving constituent percentage load reduction targets for waterbodies in the Santa Monica Bay according to TMDL compliance timeline | 4, 6, 7 |
| 4 4 | Support the development and implementation of a comprehensive regional sediment management plan for restoring natural hydrological functions of river systems and mitigating impacts from climate change | Develop plans and/or update existing plans to promote sediment transport and deposition along the coast based on hydrodynamic modeling and analyses | <u>Protection of public and private infrastructure, and ecosystem services by increasing the Los Angeles County coastline's resilience to sea level rise, and increased wave run up</u> | <u>Gather and conduct a review of applicable studies and plans to identify opportunities and strategies to actuate regional sediment management</u> | <u>USGS, CRI, USC Sea Grant, State Parks, CCC, SCC,</u> | <u>Update in semi-annual report</u> | Complete and implement a comprehensive regional sediment management plan to restore natural functions where possible and mitigate impacts of climate change | 6, 7 |

Commented [A71]: GB suggestions in this row

Commented [A72R71]: Incorporated

Commented [A73]: GB suggestion to add a social media action

Commented [A74R73]: Not incorporated because it would have needed to be included in the 2018 CCMP Action Plan revision process. TBF already maintains many social media outlets and supports / reposts others as well. Details on social media and public outreach are available as part of the semi-annual reports as well as individual project summaries, when appropriate

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* in the CCMP Next Step column = new project for FY20 Work Plan.

CWA Core – Clean Water Act Core Elements are as follows per the EPA: (1) establishing water quality standards, (2) identifying polluted waters and developing plans to restore them (total maximum daily loads), (3) permitting discharges of pollutants from point sources (National Pollutant Discharge Elimination System permits), (4)

addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (7) protecting Large Aquatic Ecosystems.

IV. ESTIMATED FY20 BUDGET

This section contains the draft budget estimated and projected for FY20. It is important to emphasize that SMBNEP's budget and Work Plan are fluid. With only the USEPA annual allocation as a consistent income source, SMBNEP must constantly work to develop new projects and find new funds, and SMBNEP staff are continuously working with possible new funding partners and applying for new awards. New projects are always in development, and staffing allocations of time and budget shift frequently to meet new obligations as additional funds are secured. This means that the Work Plan that will be brought before the Governing Board in April 2019 may be adjusted when full funding is determined to reflect SMBNEP's actual work during October 2019 to September 2020. Any such adjustments to EPA NEP funding will be documented in an amendment to the budget and Work Plan, approved by EPA.

Commented [A75]: Note: This section is new for the April version of the Work Plan but was not included as tracked changes for ease of viewing.

Commented [A76]: Paragraph addition suggested by EPA

Commented [A77R76]: Incorporated

Estimated Funding Authorization Summary Table, 320 plus Match:

| FY20 Funding Authorization Estimate (October 1, 2019 – September 30, 2020) | |
|--|------------------|
| EPA 320 FY20 Base Funding | 600,000 |
| SMBRC – Match | 200,000 |
| The Bay Foundation – Match | 340,000 |
| Loyola Marymount University – Match | 60,000 |
| Estimated Funding Total | 1,200,000 |

Descriptions of Action Categories in estimated operating budget:

- **Direct Management Actions:** to support implementation of CCMP Actions #1-18, including, but not limited to restoration of kelp forests, dunes, wetlands, and other habitats. These actions also provide support for native species such as abalone, rare species, and others.
- **Governance and Policy:** to support implementation of CCMP Actions #19-25, including, but not limited to efforts to improve water treatment facilities, adopt policies, inform management actions, and support best management practices.
- **Stakeholder Education and Engagement:** to support implementation of CCMP Actions #26-32, including, but not limited to reducing marine debris, conducting community engagement and education priorities, informing and reducing health risks to people, and implementing programs such as the Boater Education Program.
- **Research and Monitoring:** to support implementation of CCMP Actions #33-42, including, but not limited to researching and informing management actions, emerging contaminants, climate change impacts, and implementing the Comprehensive Monitoring Program.
- **SMBNEP Support / CCMP Tracking:** to support the development and implementation of CCMP, through CCMP progress tracking, SMBNEP reporting, and development of SMBNEP products.

Commented [A78]: Descriptions of action categories for the FY20 Work Plan to tie specifically to CCMP Actions.

Summary Table of Estimated 320 Funds by Action Categories:

| Work Plan Action Categories | Estimated Funds * |
|--------------------------------------|-------------------|
| Direct Management Actions | 162,200 |
| Governance and Policy | 25,100 |
| Stakeholder Education and Engagement | 61,100 |
| Research and Monitoring | 223,900 |
| SMBNEP Support / CCMP Tracking | 127,700 |
| TOTAL | 600,000 |

* Note that the FY20 320 budget funds are estimated by action category.

Estimated Operating Budget for FY20 and Estimated Matching Funds:

| Estimated Operating Budget | EPA 320 | Match |
|---|----------------|----------------|
| Salaries (Staff time allocations): | | |
| Direct Management Actions | 83,600 | 80,000 |
| Governance and Policy | 14,600 | |
| Stakeholder Education and Engagement | 35,500 | 50,769 |
| Research and Monitoring | 77,600 | |
| SMBNEP Support / CCMP Tracking | 74,300 | 115,385 |
| Fringe Benefits and Taxes @ 30% (estimate) | 85,700 | 73,846 |
| Total Salaries and Benefits: | 371,300 | 320,000 |
| Travel: | | |
| Annual NEP Tech Transfer Conference (location TBD) | 3,000 | |
| Annual ANEP/EPA Meeting in Washington DC | 3,000 | |
| Staff & Stakeholder Travel Expenses: year-round State and Local Travel (includes airfares, mileage, ridesharing, parking, etc.) | 5,000 | |
| Total Travel: | 11,000 | 0 |
| Equipment: | | |
| N/A | | |
| Total Equipment: | 0 | 0 |
| Supplies: | | |
| Marine Supplies (SCUBA gear) | 1,500 | |
| Small Equipment (replacement of laptops, desktops, cameras, | 3,000 | |
| Program Materials (field and lab materials, gloves, shovels, etc.) | 4,000 | |
| Office Supplies (printer ink, paper, flash drives, etc.) | 3,039 | |
| Total Supplies: | 11,539 | 0 |
| Other: | | |
| Marine Facilities & Maintenance (boat maintenance, berth, storage, others) | 12,600 | |
| Marine Safety (tank inspections, annual gear service, AAUS, etc) | 5,900 | |
| Sensors Recalibration Service (annual recalibration of existing | 5,000 | |

SMBNEP FY20 Work Plan

| Estimated Operating Budget | EPA 320 | Match |
|--|----------------|----------------|
| CRI Programs (funding to advance work on intertidal microplastics research; beach characterization study; modeling coastal climate stressors and adaptation strategies; native plant microbe interaction research; eelgrass and seafood genetics research; marine invertebrate physiology; habitat restoration and monitoring; general internships; and filling CMP data gaps) | 70,000 | |
| Conferences & Meetings (includes fees, refreshments, etc., for year-round conferences and meetings with stakeholders, TAC, GB, WAC) | 5,000 | |
| IT/Web/Software (IT and website services & software such as server, ArcGIS, Adobe, Microsoft office, Airtable, etc.) | 9,000 | |
| Printing & Design (printing and design for reporting, etc.) | 2,000 | |
| Communications (telephone and cell phone costs) | 4,000 | |
| Loyola Marymount University (office space, laboratory space, meeting rooms, faculty and staff support) | | 60,000 |
| SMBRC (administrative services, space, and other support) | | 50,000 |
| Total Other: | 113,500 | 110,000 |
| Contracts / Studies: | | |
| Communications Specialist (media relations services) | 14,400 | |
| Other Contracts (Match only) | | 140,000 |
| Total Contracts / Studies: | 14,400 | 140,000 |
| Indirect @ 15%: | | |
| Total Indirect @ 15%: | 78,261 | 0 |
| Volunteer Labor | | |
| Volunteer Labor (Match) | 0 | 30,000 |
| TOTAL BUDGET | 600,000 | 600,000 |

Travel Documentation

With respect to participation in federal NEP activities, SMBNEP staff will continue to attend two annual meetings each year and may also be involved in planning the meeting activities and/or lead technical workshops during the meetings. In addition, staff will attend regional NEP meetings, workshops and special NEP-related conferences and training and workshops when feasible. Staff may identify opportunities to make presentations at conferences and workshops to provide educational and technical assistance and share “lessons learned” with other NEPs and watershed-based organizations throughout the nation.

The FY19 travel summary table provides a summary of events and travel from the last fiscal year through March 2019. The FY20 table provides an estimate of travel for the next fiscal year.

FY19 Travel Summary Table through March 2019:

| FY19 Travel Summary | | | | |
|----------------------------|---|-------------------|---------------------------|-------------------|
| Date | Event/Trip Purpose | Location | Staff | Cost |
| Oct 2018 | West Coast NEP Conference / Information sharing and technology transfer among NEPs and partners | San Francisco, CA | Tom Ford, Heather Burdick | \$2,489.64 |
| Dec 2018 | RAE Conference / disseminate scientific information about key projects to partners and conference attendees | Long Beach, CA | Tom Ford, Heather Burdick | \$1,702.97 |
| Feb 2019 | ANEP / EPA National Conference. Conference for NEPs, EPA, and partners. | Washington, D.C. | Tom Ford, Heather Burdick | \$3,032.08 |
| TOTAL | ---- | ---- | ---- | \$7,224.69 |

FY20 Estimated Travel Summary Table:

| FY20 Anticipated Travel | | | | |
|--------------------------------|---|----------------------|---------------|-----------------------|
| Date | Event/Trip Purpose | Location | Staff | Estimated Cost |
| Oct – Dec 2019 | NEP Tech Transfer Conference / Information sharing and technology transfer among NEPs and partners | TBD | Tom Ford, TBD | \$ 3,000 |
| February 2020 | ANEP/EPA National Conference / Conference for NEPs, EPA, and partners. | Washington, D.C. | Tom Ford, TBD | \$ 3,000 |
| All Year, multiple dates | Staff & Stakeholder Meetings and conferences travel / Information sharing and technology transfer among NEPs and partners | Various CA Locations | All staff | \$ 5,000 |
| TOTAL | ---- | ---- | ---- | \$11,000 |

Appendix A. Table of Completed Projects in FY19.

| Project Name | Objective | Brief Project Description | Lead | Partners | Major Accomplishments | Key Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core * |
|--|--|--|------|--|---|--|--|------------|
| Malibu Lagoon Restoration and Enhancement Long-Term Monitoring Program | To assess the condition of the restoration project for a five-year period and evaluate the data against set success criteria | The Malibu Lagoon Restoration and Enhancement Project was completed in March 2013. This project collected, compiled, and evaluated more than five years of physical, chemical, and biological monitoring data and produced Annual Reports (5) and a Final Evaluation Report (2019). Data included water and sediment quality, vertical profiles, channel cross-sections, CRAM, vegetation, SAV, birds, invertebrates, fish, and photo point. | TBF | State Parks, RCDSMM, Cooper Ecological | Overarching trends for the restored area of the lagoon indicate that lowering the lagoon elevation, creating a wider channel directed towards the incoming tide, orienting channel configurations in line with prevailing wind patterns, and removing the pinch points have led to an increase in circulation both in an open and closed berm lagoon condition. Biological communities have continued to establish over time, with California Rapid Assessment Method surveys indicating condition improvement over time and as compared to pre-restoration data. All success criteria are being met or exceeded. | Five (5) Annual Reports; Final Assessment Report (Summer 2019) | Enhanced and increased wetland habitat; enhanced adjacent transition habitats; improved water quality and circulation and other ecological and ecosystem functions | 5, 6 |
| Coastal Dune Community Stewardship Project | To continue and expand efforts to engage the community with educational opportunities and ongoing public stewardship of the LAX Dunes and an emphasis on opportunities for disadvantaged communities | This project, in partnership with Friends of LAX Dunes, hosted educational hands-on restoration events at a minimum frequency of monthly for a three-year period. This unique opportunity offered adults and children to visit, learn, and help restore a private expanse of dune habitat in southern California – the largest remnant coastal dune system in the region. | TBF | LAWA, FOLD, SCC | Over the 3-year grant period, 49 community restoration events were held during which 1,594 volunteers contributed 4,829 hours towards removing invasive vegetation and restoring dune habitat. The project recruited volunteers, including many students from inland and underserved communities. The project also included an educational session associated with each event about the history of the site and dunes in southern California, their ecological importance, and information about rare dune species. | Two (2) Annual Reports; Final Report (Summer 2019) | 1) Restore 48 acres of LAX Dune system and maintain larger 300-acre Preserve to improve native dune functions and provide habitat for rare species; 2) Promote participation of disadvantaged communities in restoration, greening, and pollution reduction projects | 6 |

Appendix A. Table of Completed Projects in FY19.

| Project Name | Objective | Brief Project Description | Lead | Partners | Major Accomplishments | Key Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core * |
|---|---|---|------------|--|---|---|--|------------|
| 1-Year Agreement for Consultant Services Related to Improvements in the LAX Dunes | To continue ongoing restoration efforts in the Coastal Dunes Improvement Project area of the LAX Dunes and to collect and evaluate biological monitoring data | Activities included as part of this 1-Year Agreement focused on habitat maintenance and recommendations for the Coastal Dunes Improvement Project (CDIP) area in compliance with CDP No. 5-12-263. Restoration efforts were focused in the 6-acre foredune area where roads were previously removed by LAWA. Additionally, biological monitoring was conducted on the 48-acre northern dune area. | TBF | LAWA, FOLD, LACC, RSABG, Psomas | TBF and their scientific partners conducted a site-wide comprehensive vegetation assessment for the northern 48-acre area of the dunes. This assessment informed the monitoring plan as well as the recommendations for invasive vegetation removal and native revegetation. Additionally, 18 community restoration events were held during this time period, including 678 volunteers contributing over 2,000 hours towards removing over 700 bags of non-native vegetation. Los Angeles Conservation Corp crews weed whacked an additional 7.8 acres of non-native brome grass and removed nearly one acre of iceplant. | Ecological Monitoring Report; Annual Progress Report | Restore 48 acres of LAX Dune system and maintain larger 300-acre Preserve to improve native dune functions and provide habitat for rare species | 6 |
| Wetland Program Development Grant - Wetland Data Consolidation and Management | To continue to build towards consistent and standardized approaches to wetland monitoring across California | Monitoring and assessment strategies developed by the State of California and USEPA universally call for coordinated and consistent approaches to monitoring and assessment. This program continued efforts to develop standardized intensive (i.e., Level 3) assessment methods and a framework for their application for coastal wetland systems in California. This program consolidated regional datasets with varying sampling designs and frequencies, determined their comparability, and identified recommendations for | SMBRA, TBF | TRNERR, CSULB, SCCWRP, California Wetland Monitoring Workgroup | Intensive methods provide information on ecological function, are more diagnostic of restoration performance and regulatory compliance, and are important for the validation of rapid assessment methods. This program took significant strides in consolidating regional datasets with a series of complex analyses to inform a revision of the California Wetland Monitoring Manual. Outreach included stakeholder meetings, conferences, and coordination with other statewide wetland monitoring groups. Several manuscripts are currently in development with the results of the data analyses. | California Wetland Monitoring Manual (V2, October 2019); Final Data Consolidation Report (October 2019) | Enhanced statewide coordination and standardization of coastal wetland monitoring and assessment; technical support for wetland restoration projects in California | 5, 6, 7 |

Appendix A. Table of Completed Projects in FY19.

| Project Name | Objective | Brief Project Description | Lead | Partners | Major Accomplishments | Key Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core * |
|---|---|---|----------------------|--|--|---|--|------------|
| | | consistency across future wetland monitoring programs. | | | | | | |
| Southern California Green Abalone Restoration | Reintroduce and restore abalone | The Green Abalone Restoration project began in 2015 to implement green abalone recovery within restored kelp forest sites off the Palos Verdes Peninsula. This four-year grant later included funding for the construction of an abalone laboratory and aquaculture facility located at Southern California Marine Institute and initial red abalone outplanting trials that are serving as proxy for future endangered white abalone recovery. | TBF | NOAA, SCMI CDFW, | Completed construction of two aquaculture laboratories at SCMI, 15 captive spawning trials, 12 wild green abalone deck spawning experiments, 1 wild red abalone deck spawn, collection of wild green and wild red broodstock, outplanted 827 green juvenile abalone, 2,400 juvenile red abalone outplanted over two events | Final Grant Report to NOAA NMFS (Contract ends Sept 2019) | Facilitate endangered white abalone recovery efforts; Provide a space for continued research on rearing and spawning techniques for captive bred abalone | 6, 7 |
| University Park Neighborhood Rain Gardens (Prop 84) | Increase groundwater recharge and decrease polluted runoff to Ballona Creek | The project installed rain gardens in the University Park area of Los Angeles near USC, to capture, treat and infiltrate all dry- and some wet-weather runoff (including trash) from a 209-acre drainage in the Ballona Creek watershed. | City of LA | SMBRC, SWRCB | Installation of 35 rain gardens on public parkways in a highly urbanized area of Los Angeles. Reduced impermeable surface. Provided local wildlife habitat. Enhanced green space. | Construction Plans, Completed Construction, Final Report | Help comply with Ballona Creek TMDLs for metals, bacteria, and trash; address diffuse, non-point sources of pollution | 2, 4, 6, 7 |
| Milton Street Park (Prop 84) | Increase groundwater recharge and decrease polluted runoff to Ballona Creek | The project installed Vegetated Stormwater Curb Extensions (VSCEs) on both sides of Milton Street in Los Angeles, to capture, treat, and infiltrate dry- and some wet-weather runoff in the Ballona Creek watershed. | MRCA | City of Los Angeles, County of Los Angeles, SWRCB, SMBRC | Installed 14 Vegetated Stormwater Curb Extensions (VSCEs) to both sides of Milton Street, adjacent to Ballona Creek. Planted native shade trees and a variety of shrubs. Reduced impermeable surface. Improved pedestrian and bicycle safety. | Construction Plans, Completed Construction, Final Report | Help comply with Ballona Creek TMDLs for metals, bacteria, and trash; address diffuse, non-point sources of pollution | 2, 4, 6, 7 |
| Table-to Farm | Reduce food waste being sent to landfills, compost food | To better address food waste and greenhouse gas emissions from landfills and transportation due to hauling | Schools, restaurants | TBF | This project built a third community compost bin for food waste and secured restaurant partners to participate in the program. | Final Report | Reduce food waste being sent to landfills and improve air quality; increase | 4 |

Appendix A. Table of Completed Projects in FY19.

| Project Name | Objective | Brief Project Description | Lead | Partners | Major Accomplishments | Key Deliverables | Long-Term Environmental Result(s) / Outcome(s) | CWA Core * |
|-----------------------|---|---|------|--|---|---|---|------------|
| | waste, and apply compost to urban gardens to grow food. | waste, TBF is working with restaurants and Environmental Charter Schools. Restaurants recycle food waste at schools, where students produce compost which is used to amend garden soil to grow local produce. | | | | | awareness of food waste issues, compost, and climate change and provide fresh produce to food desert communities; improve soil quality for community supported agriculture and carbon sequestration | |
| ReThink Disposable LA | Source reduction of single-use disposable items from food service establishments. | Partner with Clean Water Action / Clean Water Fund to implement the ReThink Disposable program in Los Angeles. Work with local food establishments and provide technical assistance to prevent excess waste. | TBF | Clean Water Action / Clean Water Fund, restaurants | Source reduction at four restaurants resulting in 247,570 pieces of product reduced, 2,637 lbs of waste reduced, and \$8,017 in restaurant savings, annually. | 4 Final Reports, 3 Case Studies, 2 Video Testimonials | Source reduction of litter prone trash; support bans on single use disposable plastics | 4 |

* **CWA Core** – Clean Water Act Core Elements are as follows per the EPA: (1) establishing water quality standards, (2) identifying polluted waters and developing plans to restore them (total maximum daily loads), (3) permitting discharges of pollutants from point sources (National Pollutant Discharge Elimination System permits), (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (7) protecting Large Aquatic Ecosystems.

The following table summarizes estimates of projected EPA 320 funding allocated towards projects that will be completed in FY19. Note that at the time of this Work Plan, only one quarter of FY19 has been closed, so the following numbers are rough estimates.

| Project Name | EPA 320 Funds (est) | Project Name | EPA 320 Funds (est) |
|---|---------------------|---|---------------------|
| Malibu Lagoon Monitoring | \$ 2,000 | University Park Neighborhood Rain Gardens (Prop 84) | \$ - |
| Coastal Dune Community Stewardship Project | \$ - | Milton Street Park (Prop 84) | \$ - |
| LAX Dunes Restoration | \$ 9,000 | Table-to Farm | \$ 5,000 |
| Wetland Program Development Grant | \$ - | ReThink Disposable LA | \$ 5,000 |
| Southern California Green Abalone Restoration | \$ 45,000 | | |

SMBNEP works as a collaborative partnership staffed by The Bay Foundation (TBF), Santa Monica Bay Restoration Commission (SMBRC), and Santa Monica Bay Restoration Authority (SMBRA) to implement the 2018 CCMP Action Plan via annual Work Plan implementation. All SMBNEP staff, whether TBF employees, State Water Resources Control Board (SWRCB) employees, or LA County staff assigned to SMBRA, contribute to the implementation of the Annual Work Plan and CCMP by carrying out its described tasks and actions. The following section describes the entity affiliation(s) and key responsibilities of each SMBNEP staff.

Commented [A79]: Note: This section is new for the April version of the Work Plan but was not included as tracked changes for ease of viewing.

The Bay Foundation staff as of 1 April 2019:

| Title | Name | Key Responsibilities |
|--|--------------------|--|
| Executive Director | Tom Ford | SMBNEP management and coordination, direct, supervise and coordinate CCMP and work plan implementation; strategic development of programs, partnerships, and projects; oversight and direction of TBF staff; execution of contracts, policies and management practices of TBF; oversee TBF audits; represent SMBNEP; oversee program evaluations; develop, inform, and implement programs of the Coastal Research Institute |
| Administrative Director | Marcelo Villagomez | Oversee TBF's finances and resources; Inform, direct, and implement best practices and policies for TBF human and financial resource management including; administrative oversight, human resources, accounting, budgeting, invoicing, purchasing, grant management, audits; update and maintain administrative policies, guidelines, payroll, operating procedures and manuals, conduct financial planning |
| Science Director | Karina Johnston | Develop and direct programs contributing to research, monitoring, and ecological restoration activities; supervise, recruit, and train staff, students, interns, and volunteers; lead authorship of technical and scientific documents, and publications; develop and implement partnerships, collaborations, and outreach strategies to facilitate CCMP / CMP implementation; apply for grants; CRI programmatic management |
| Director of Marine Operations, Executive Assistant | Heather Burdick | Develop and direct operations including research, monitoring, and ecological restoration for marine program activities; direct fieldwork, labwork, report and technical document writing, outreach, and related tasks; supervise staff, interns, and volunteers; develop and coordinate partnerships; apply for grants; support CRI; serve as the Executive Assistant to the ED |
| Director of Watershed Programs | Melodie Grubbs | Develop and direct operations including research, monitoring, and ecological restoration for watershed program activities; direct fieldwork, labwork, report and technical writing, outreach, and related tasks; supervise staff, interns, and volunteers; develop and partnerships; apply for grants; support CRI |
| Watershed Programs Coordinator | Chris Enyart | Coordinate research and monitoring activities, including fieldwork, labwork, data collection, data analyses and quality control/assurance; recruit and supervise interns, students and/or volunteers; support the Director of Watershed Programs in authorship of technical documents, grant applications, and publications; support CRI |
| Watershed Programs Technician | TBD | Conduct research and monitoring activities, including fieldwork, labwork, data collection, quality control/assurance, and data analyses; recruit and supervise interns, students and/or volunteers; support the Director of Watershed Programs in authorship of technical documents, grant applications, and publications; support CRI |
| Marine Programs Coordinator | Armand Barilotti | Coordinate research and monitoring activities, including fieldwork, labwork, data collection, quality control/assurance, and data analyses; recruit and supervise interns, students and/or volunteers; support the Director of Marine Operations in authorship of technical documents, grant applications, and publications; support CRI |

Appendix B. Santa Monica Bay National Estuary Program Staffing.

| Title | Name | Key Responsibilities |
|--------------------------------------|------------------|---|
| Marine Programs Coordinator | Parker House | Coordinate research and monitoring activities, including fieldwork, labwork, data collection, quality control/assurance, and data analyses; recruit and supervise interns, students and/or volunteers; support the Director of Marine Operations in authorship of technical documents, grant applications, and publications; support CRI |
| Marine Programs Field Technician | Adri Sparks | Conduct research and monitoring activities, including fieldwork, labwork, data collection, quality control/assurance, and data analyses; support the Director of Marine Operations in authorship of technical documents, grant applications, and publications; support CRI |
| Community Engagement Program Manager | Victoria Gambale | Contribute to program development and planning; manage grants; plan and develop stakeholder meetings, trainings, workshops, field work, and outreach emphasis on pollution reduction related to restaurants and boating; research, develop, distribute, and present education and outreach materials; apply for grants; support the Administrative Director in needed tasks |
| Community Engagement Coordinator | Georgia Tunoli | Coordinate Clean Bay Certified Restaurant Program; coordinate quarterly vessel sewage pumpout monitoring activities for Southern California harbors; implement mobile pumpout programs; assist the Community Engagement Program Manager |
| Community Engagement Coordinator | Kimberly Riley | Coordinate and support efforts to implement the Boater Education Program; coordinate development of education and outreach materials; assist the Community Engagement Program Manager; support Administrative Director in needed tasks |

Santa Monica Bay Restoration Commission staff as of 1 April 2019:

| Title | Name | Key Responsibilities |
|-------------------------------|--------------|---|
| Chief Administrative Director | Guangyu Wang | Prepare materials for and execute the meetings of the Governing Board (GB), the Executive Committee (EC), the Technical Advisory Committee (TAC), and the Watershed Advisory Council (WAC); interact with State, Federal, Local and other funding authorities to ensure compliance with regulatory and funding requirements; perform administrative functions associated with SMBRC; oversee grant management for State bond-funded projects; collaborate on SMBNEP work plan development, reporting requirements, and products |
| Environmental Scientist | Jack Topel | Conduct grant oversight and management for State bond-funded projects; coordinate with partner agencies in developing and implementing restoration programs and monitoring efforts in support of the CCMP; compile and provide information to stakeholders and the general public on various SMBRC projects; support the Chief Administrative Director in executing Commission meetings |

Santa Monica Bay Restoration Authority staff as of 1 April 2019:

| Title | Name | Agency | Key Responsibilities |
|-------------------------------|--------------|---|--|
| Chief Administrative Director | Guangyu Wang | SMBRC | Serve as Executive Officer of the SMBRA; supervise administrative staff and functions of the SMBRA including budget preparation, reports, audits, meeting logistics, grants, contracts, applications and project tracking; perform administrative functions; coordinate meetings |
| Environmental Scientist | Jack Topel | SMBRC | Support the Chief Administrative Director in SMBRA tasks and activities |
| Senior Civil Engineer | Cung Nguyen | LA County Public Works Stormwater Planning Division | Assist with SMBRA administrative support and compliance |
| N/A | As assigned | LA County Public Works | Review SMBRA invoicing and approved for payment |
| N/A | As assigned | LA County Public Works | Assist SMBRA with projects and compliance |